COMPARISON OF THREE APPROACHES TO TEACHING MUSIC FUNDAMENTALS ON ACHIEVEMENT OF BEGINNING BAND STUDENTS

by

Barbara Elaine Johnston MacMillan

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We accept this thesis as conforming
to the required standard

[redacted]

Dr. Ian Bradley

[redacted]

Dr. Margery Vaughan

[redacted]

Dr. Bill Cross

[redacted]

Dr. Beverly Timmons

UNIVERSITY OF VICTORIA

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Supervisor: Professor Ian Bradley

ABSTRACT

This study compared achievement gain of three heterogeneous band classes, each of which was instructed on music fundamentals using a different teaching approach, and subordinately, the relationship between achievement and certain intervening variables. Research seems to indicate that an eclectic instructional approach is ideal and further inquiry into different teaching methods seemed necessary to discover what contributions each could make to a course of study.

The three methods this study investigated were the lecture approach, the self directed text-workbook approach and the computer approach. The material used in each was Sandy Feldstein's Practical Theory (1982), in the form of his text-workbook and/or computer program, or material derived from it. A survey was developed to obtain information on each student's music background, etc. A questionnaire was used to discern student self- concept and learning style preference.

The subjects for this study were sixty-five grade seven beginning band students from two schools within the County of Vermilion River, Alberta. A pretest designed to measure students' preknowledge of music fundamentals was

administered. The lecture approach group studied Feldstein's first twenty-eight lesson concepts. The subjects in the other two groups were individually assigned twenty-eight lessons according to their pretest results. At the end of the three to four month treatment period, a posttest, an extended version of the pretest, was given. Five months after the end of the program, the posttest was readministered to test for retention.

For purposes of direct compatability, N = 49 are statistically valid although results from all sixty-five subjects are also provided in brackets as a matter of interest. In addition to a comparison of achievement on the post and retention tests the test questions were broken down into three categories for a further comparison of gain. According to analyses of covariance between each test and the pretest, and their three question categories by each treatment group, there was no significant difference at the $P < .05$ level.

A comparison for significant differences between percentages of specified factors found in each treatment group, which could have a bearing on achievement, was done. The obtained difference in the areas of enjoyment of elementary school music and family attendance at music concerts was significant while for the following it was

not: gender, participation in private music lessons and parents' music background.

The Pearson correlation co-efficient was used to see if there was any relationship between achievement gain of the three treatment groups and Otis-Lennon measurement of intelligence. The results were significant at the P = .01 level for the lecture group only (.4813).

Analysis of variance was performed on each response to questions designed to measure student self-concept and learning structure preference. There were no significant differences among the three treatment groups except to the questions "I like Teachers To Keep Students Quiet". The most positive responses came from the two individualized approach treatment groups (means of 4.25 and 3.57 for the text-workbook and computer group respectively as compared with 2.86 for the lecture group).

Examine[redacted]

Dr. Ian Bradley

[redacted]

Dr. Margery Vaughan

[redacted]

Dr. Bill Cross

[redacted]

Dr. Beverly Timmons

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DEDICATION

This thesis is gratefully dedicated to Dr. Vaughan. Without her assistance this paper would never have been completed. Best wishes to Dr. Vaughan in her retirement and in her future endeavors.

CHAPTER I

INTRODUCTION

School music teachers are constantly challenged with the task of simultaneously educating students of widely differing interests, aptitude, and formal musical instruction.

> Music for Every Child, Every Child For Music, which was the slogan adopted by the American Supervisor's National Conference, succinctly expresses the view shared by Orff, Kodaly and Susuki; they have all declared that the musical instinct is universal, that all children possess innate musicianship in varying degrees and that all are therefore potentially musical. Only misguided egalitarianism would deny the existence of individual differences in musical ability, attainment and maturity and the need to make adequate provision for them. . .(Brocklehurst, 1971, p. 31-32).

Some examples of the multitudes of variables which can make it difficult for a teacher to meet the needs of students in heterogeneously grouped classrooms are: a) differences in genetic intelligence, b) diversity in learning style preferences, c) variety in parental attitudes towards music, d) differences in cultural environment, e) dissimilar previous musical experiences, and, f) differing student aptitudes (Brocklehurst, 1971; Bellard, 1985.

Music instructors have access to various teaching materials on music fundamentals (i.e., theory). An ongoing concern in school instrumental classes is that music theory correlate with the practical aspects of the

course. Consequently, it is the practise of some teachers to introduce a theory component only when it is necessary to the performance of a piece of music. Other teachers try to emphasize theory concepts by using distinct music fundamental teaching materials. Music fundamental materials are available in various formats such as: a) class lecture, b) individualized text and workbook, and c) computer programs. Perhaps one of these approaches will best meet the needs of a heterogeneous school music class.

This study was concerned with a comparison of specific music fundamental formats (i.e., approaches) on student achievement. To a lesser degree, it was also concerned with the effect of student self-concept and approach preference on student achievement within each treatment group. In addition, factors such as a) I.Q., b) gender, c) parents' music background, d) students' participation in private music lessons, e) student enjoyment of their elementary school music program, and f) family attendance at music concerts were compared for each treatment group. The material used was intended to be a constant in all three approaches. The material chosen was Feldstein's Practical Theory as it was recommended in the pilot curriculum for Alberta's instrumental program, 1985.

BACKGROUND OF THE PROBLEM

Students entering the band program in grade seven within the County of Vermilion River, Alberta, may be said to be a fairly typical representation of students with a varied background in music. The quantity and quality of their previous music experience is dependent on the musical expertise of their various elementary school teachers. A few of the students have had from one month to six years of private music instruction, while others have had no previous formal music experience.

The music teacher does not get to select which student he/she would like. Indeed, the teacher must develop ways to teach all students, regardless of their music ability. Even through Brocklehurst made the following statement over fifteen years ago, it seems equally valid for today:

> A school's music can perhaps best be judged by the provision it makes for those children with little obvious musical ability (1971, p.33)

This diversity of music backgrounds amongst beginning band students would seem to suggest that, to best meet the needs of each student, an individualized course on music fundamentals should be utilized. This raised several questions. Does one method obtain better results in teaching specific concepts than another one? Does one

method augment retention over another one? Does student self-concept and learning structure preference affect the achievement of each treatment group?

The combination text-workbook is one type of material readily available to the classroom teacher which can facilitate an individualized method of instruction in music theory. Once a pretest of student knowledge of music fundamentals has been administered, students can be assigned lessons to meet their individualized needs as indicated by their pretest results.

In conjunction with this concern for individualized instruction, there seems to be a growth in availability and popularity of various computer software dealing with the subject of music theory. The writer wondered whether a marked improvement in achievement could be obtained through the use of a computer assisted course, or whether at this stage of computer software technology, use of presently available software is simply a fad.

PURPOSE OF THE STUDY

The purpose of this study was to compare achievement and, subordinately, the effect of student self-concept and approach preference on achievement, of three groups of beginning band classes, each of which was instructed by means of a different method of teaching music

fundamentals. The three approaches selected for this study were: a) Group, utilizing the lecture method with accompanying overhead transparency material and student exercises, b) Individual, using a self directed text-workbook, and c) Individual, using computer assisted instruction.

HYPOTHESES

The independent variables in this study are the three approaches to teaching music fundamentals: the lecture method, the text-workbook approach and computer assisted instruction. The dependent variable was student achievement. In addition to a comparison of achievement on the post and retention tests the test questions were broken down into three categories for a further comparison of gain: a) N = notation, dynamic and tempo symbols,
b) V = note and rest values and time signatures, and
c) S = scales, and intervals.

Hypothesis I: There will be no significant difference in music theory achievement between students taught by the three instructional approaches on the posttest.

Sub-hypothesis Ia: There will be no significant difference in music theory achievement on Part N (notation, dynamic and tempo symbol questions) between students taught by the three instructional approaches on the posttest.

Sub-hypothesis Ib: There will be no significant difference in music theory achievement on Part V (note and rest values, and time signature questions) between students taught by the three instructional approaches on the posttest.

Sub-hypothesis Ic: There will be no significant difference in music theory achievement on Part S (scale and interval questions) between students taught by the three instructional approaches on the posttest.

Hypothesis II: There will be no significant difference in music theory achievement between students taught by the three instructional approaches on the retention test.

Sub-hypothesis IIa: There will be no significant difference in music theory achievement on Part N (Notation, dynamic and tempo symbols) between students taught by the three instructional approaches on the retention test.

Sub-hypothesis IIb: There will be no significant difference in music theory achievement on Part V (note and rest values and time signatures) between students taught by the three instructional approaches on the retention test.

Sub-hypothesis IIc: There will be no significant difference in music theory achievement in Part S (scales,

and intervals) between student's taught by the three instructional approaches on the retention test.

Hypothesis III: There will be no significant relationship between music theory achievement and student self-concept between students taught by the three instructional approaches.

Hypothesis IV: There will be no significant relationship between music theory achievement and student learning structure preference between students taught by the three instructional approaches.

DEFINITION OF TERMS

Music Fundamentals: Music theory or grammar

Achievement: Cognitive growth in music fundamentals as a result of the course.

Attitude: How students felt about the method of presentation.

CAI: Computer Assisted Instruction.

Individualized Instruction: Programmed instructional materials which allow the student to progress at his/her own rate to meet individually set objectives.

Eclectic: Composed of elements selected from diverse sources.

I.Q.: Intelligence quotient as measured on the Otis-Lennon Test.

LIMITATIONS OF THE STUDY

Due to geographical distance from a large centre, the researcher was limited to three classes of subjects, one for each teaching approach. There were only twenty-two to twenty-three subjects in each treatment group.

Since the purpose of the study was a comparison of three approaches to teaching music fundamentals, only a cursory attempt was made to discover student self-concept and learning style preference and their relationship to each treatment group's achievement. Research into possible intervening variables which could affect student achievement was limited to: a) I.Q., b) gender, c) enjoyment of elementary school music, d) their parents' music background, e) possible participation in private music lessons, and f) the families' frequency of attendance at music concerts.

SIGNIFICANCE OF THE STUDY

In order to develop an effective teaching approach, research on the value of specific teaching methods is required. Spohn (1969) found that:

> The experienced teacher seems to learn that combination of different methods is important to a balanced instructional program. There has been, however, little opportunity to isolate and evaluate the effectiveness of different methods of material presentation and to compare the

> effectiveness of these presentations when various kinds of responses are made. Students are often exposed to one or more methods in the belief or hope that the desired learning will result from instruction.
>
> The literature in all areas of learning shows that optimum learning for all students is not achieved. The results do not indicate a revolutionary truth that remains unequivocal (p. 94).

Though some time has elapsed since Spohn made this observation, it seems that the problems of accommodating to individual differences are still unresolved. It is hoped that the results of this study will lead to further investigation with regard to music theory.

CHAPTER II

REVIEW OF THE LITERATURE

This section will concern itself with learning theories and their application to teaching methodology, as well as previous research in the areas of student achievement, self- concept and attitude towards teaching approaches, as they relate to the three methods used in this study.

METHODOLOGIES

One of the reasons for the innumerable teaching methodologies is that learning theorists agree that people learn in various ways. Researchers have failed to discover a form of instruction that allows all subjects to learn to their optimum ability. Logan and Ferraro (1978) have stated that:

> .....years of inquiry have failed to provide a systematic analysis of learning with anything approaching the elegance of the laws of motion in physics or the periodic table of elements in chemistry (p. 1).

The classroom teacher is faced with a myriad of instructional methods, each prepounded by an ardent supporter. One concern is that learning approaches may be developed to attain specified learning objectives within a laboratory situation, but they may not be appropriate for

the classroom environment, with its many intervening variables. Weinhart (1980) stated:

> The history of the practical application of the results from research in instructional psychology leads one to suspect that instructional psychologists and practical instructors will continue to encounter each other like the fox and the sparrow in the fable. The sparrow had asked the fox, how one could manage to survive the winter. The fox advised him to turn into a crysalis. The sparrow took the advise with satisfaction, but after a short while he returned to ask how one could do that. The fox became angry: "I told you what to do; how you will do it, is your problem, not mine!" (p. 20).

Lindgren (1982) suggested that the trend in education has been towards "learner-centeredness". Several sources suggested that many educators pay lip service to the individualized instruction method but that group instruction in a classroom setting is still the most common practise (Lindelow, 1983; Lindgren, 1980). Cited as evidence of this, it is pointed out that objectives are usually stated in behavioral terms for an individual student, and yet methods and materials are usually developed to teach classes of students (Thiebe, 1972; Kapfer, 1970). This irony can create a good deal of frustration on the part of teachers, since the material has been developed for the "average" child, and does not meet the learning needs of all students.

GROUP INSTRUCTION

This does not mean that there are not positive attributes to group instruction. With this type of approach, children reinforce each other and students seem to accept correction more easily from their peers than from a teacher. Because this type of learning fosters common experiences, students can discuss concepts together and learn social skills. One other advantage is that some students feel duress when faced with the necessity for self direction and creativity, more often components of individualized instruction than group instruction (Lindgren, 1980).

Burkett (1982) discussed some points that may be applied to group teaching in general. With group teaching, the teacher can use a variety of teaching approaches, a broad range of material can be covered so the teacher is using time effectively, and students learn from mistakes of classmates. In a study by Johnson et al. (1976), it was found that "cooperative, compared to individualized learning results in greater ability to take the affective perspective of others, more altruism, more positive attitudes towards classroom life, and higher achievement" (p. 446).

Some disadvantages to group instruction are: a) Teachers often plan, control and guide the class much more than is necessary, b) competition between students in a classroom situation is sometimes more severe than that found in the work place (Lindgren, 1980), and c) class time spent on review of concepts for the benefit of the slow learners is unproductive for the gifted students who do not need the repetition.

INDIVIDUALIZED INSTRUCTION

In the context of this study, individualized instruction is taken to mean the use of programmed instructional materials which allow the student to progress at his/her own rate and meet individually set objectives. Very little research seems to have been done on the use of combined texts and workbooks utilized to provide individualized instruction. Crist (1968) found that students in his sample population found programmed texts boring and soon lost interest.

Brophy (1984), although agreeing with the need for individualized instruction, stated that individualized learning packages would not work for everyone in the class. Some students would "get on the wrong track" because one classroom teacher cannot continually monitor the progress of each student. He felt that the teacher

should individualize the instructional method for each student rather than attempting to use individualized materials.

COMPUTER INSTRUCTION

Considerable research has been done on computer assisted learning, which can be defined as follows:

> A man-machine interaction in which the teaching function is accomplished by a computer system without intervention by a human instructor. Both training material and instructional logic are stored in computer memory (Salisbury, 1973, p. 11)

Researchers in the use of computer assisted instruction (CAI) do not all agree that it provides the most effective means of teaching. According to Hartman (1973), CAI is very effective in some subject areas. In areas that call for creativity, it did not fare well. Research suggests that the prime benefit of CAI is that of individualizing instruction. Franklin (1983) stated:

> CAI may not teach better, but it does permit students to progress and work at their own pace, thereby enabling the teacher to concentrate on group learning activities (p. 32).

Allvin (1971b) suggested that the music curriculum has two main objectives: a) To train students in basic skills such as ear training, instrumental or vocal technique, sight reading, etc., and b) to develop musicianship and "aesthetic discrimination". He is of the

opinion that, at the present state of the art in computer software and hardware, CAI is most useful in achieving the first objectives where drill and practise are required, as it necessitates less time to acquire these skills than other methods he studied. This would suggest that teachers who use CAI have more time to spend on musicianship development within their classes. Research findings of Abrahsom and Weiner (1973) did not agree with this supposition. They found that division of teaching time for each objective did not significantly change, even with teacher retraining.

The development of software and hardware is still in its infancy. Programs can now be individualized to the extent of allowing the student to proceed at his own pace, study material at his level, and provide immediate feedback. Unfortunately, current software does not let the student digress to related topics or raise questions concerning the material he has just covered.

At the recent International Society of Music Education Conference (1986) concern was raised by several members about an "open arm" acceptance of computer software before sufficient research has been done on its merits and demerits as a teaching tool. Murphy (1985) states:

> ....it is argued that technology does not merely represent a set of devices that teachers may choose to use, but more importantly advances a world-view that shapes social existence. The image of social life that technology conveys is not currently receiving serious consideration from those who are rushing headlong to incorporate computers into the classroom. As a result the possible deleterious consequences of a technological education are not being exposed (p. 98).

Some advantages of CAI are: a) Software programs are expensive and you must have the corresponding hardware to use them, b) it does not remedy the situation which arises when some students complete their assignments ahead of others, and, c) computers can malfunction. Schwandt and Wiederanders (1985) point out that even though computer enthusiasts would have us believe that this instructional method will transform education it:

> ....is unthinkable dehumanizing. It is also difficult to reconcile with educational goals which include the development of students with skills in critical and divergent thinking as well as students who assume increasing levels of responsibility for their own learning. Inherent in the power of the computer is the danger of allowing the educational process to be controlled if not consumed by it (p. 32).

However, there are also advantages to computer assisted instruction a) Teachers do not have to teach basic materials and skills over and over, b) computers are unbiased, patient and currently very popular with the students, c) the teacher does not have to mark a

workbook to provide feedback, and the feedback students do receive from the computer is often more frequent and rapid than that which could be provided by the teacher, and, d) the student is taken out of a competitive situation with the rest of the class and can set his own pace.

ECLECTIC APPROACH

Research on human learning would seem to suggest that learning is an individualized process, each child assimilating knowledge differently. This would lead one to postulate that a "multisensory" approach to teaching may be best (Lall & Lall, 1983). Dunn and Keefe (1983), and Lindelow (1983) agreed that individuals differ greatly in the way they "perceive, process, remember and organize information" (Lindelow, 1983, p. 13). Lindelow assumed that "adjusting learning styles and the instructional environment to complement individual learning differences will promote a more efficient learning process" (p. 13).

It would be difficult to implement Lindlow's ideal learning situation for the reasons that a) it would be very expensive in terms of teaching staff and materials, and, b) it is difficult to change the status quo. One possible solution is the use of computer assisted instruction. It works best with students who are "visually

dominant, who prefer to work alone, and who have strong intuitive and diagnostic abilities" (p. 29). With the development of talking computers and ones with which students can communicate verbally, this system will be better able to encompass all learning-style preferences.

STUDENT SELF-CONCEPT

Research indicates that student self-concept is closely related to school performance (i.e. achievement) (Haggard, 1981). A particular teaching approach may foster a better self-concept. Lepper and Chabay (1985) state:

> Different folks require different strokes... Different forms of instruction, types of feedback, and uses of the computer will be appropriate for different tasks, for different learners, and for learners at different stages in the learning process. To be most effective, instructional choices must be suited to the motives and interests of students as well as their cognitive aptitudes and capabilities (p. 218).

SUMMARY

Scarbrough (1975) found that students had a higher level of achievement when they had a choice between self-paced programmed instruction and group instruction than when they were limited to one learning strategy alone. It would seem evident that the employment of a number of teaching strategies is more effective than the use of just one. Computer assisted instruction, a method which is currently receiving a great deal of attention from music educators, can not be said to best meet the needs of all learning styles at this time. Current education research (Sand & Kerry, 1982; Lawrence, 1979) suggested that educators must "tune in" to each child's preferred learning style and adapt teaching strategies to each unique group of individuals. Further research is necessary to find out the strengths of various methods so that this information can be utilized by the teachers.

CHAPTER III

METHOD

SUBJECTS

The subjects for this research were grade seven beginning band students in the County of Vermilion River, in East Central Alberta. The two band classes in the town of Kitscoty, each of which contained twenty-two students, and one of the two classes in the town of Vermilion, with twenty-three students, formed the three treatment groups.

Due to the close proximity of Vermilion and Kitscoty (twenty-five miles), students attending school in either town come from basically the same socio-economic class. Both small towns are stable, rural communities with approximately sixty percent of each school's population living on nearby farms.

Band is a relatively new addition to the curriculum in this County. Band is in its sixth year of operation in Vermilion and in its first year in Kitscoty. It is an elective for Vermilion students and approximately forty percent of the present grade sevens chose band. In Kitscoty, grade seven band is compulsory. In both programs, students must supply their own instrument if they choose to play a flute, clarinet, alto sax, tenor

sax, trumpet or trombone. Oboes, bassoons, euphoniums, tubas, and percussion equipment are rented from the school. Both schools have their own band teacher. Close communication is carried on by the two teachers concerning their respective band programs as they are a married couple.

MATERIALS

The instructional methods as well as the pre and post retention tests, either use, or were developed from Sandy Feldstein's Practical Theory (1982) course, Volumes One, Two and Three. There are four main reasons for this: a) Feldstein's materials are found on the resource list accompanying the Alberta Secondary Music Curriculum currently being piloted, b) Feldstein's materials are readily available at music stores in Alberta, c) the Feldstein Practical Theory (1982) course has a complementary computer course, and, d) use of Feldstein's materials as the basis for all the tests and materials for each instructional method provides one form of internal validity to the study.

The researcher developed the teacher's notes for the lecture course, overhead transparencies and student hand-outs, as well as the pre and post retention tests (Appendix A, B & E), using the theory concepts and

sequence of presentations taken from Feldstein's Practical Theory (1982), Volume One. The computer method employed by the complementary computer software, Practical Theory (1982), Volumes One and Two, with the text-workbook serving as clarifier for each new concept as it was introduced on the computer. The computer software required the use of Apple computers. The text-workbook instruction method used Feldstein's Practical Theory (1982), Volume One.

A survey and questionnaire were constructed for this study. The purpose of the survey was to gather data on some intervening variables such as each student's age, musical background, etc. (Appendix C). The questionnaire was designed to evaluate student self-concept and approach preference (Appendix D). Each question allowed the subject to choose one of five responses from negative to positive. Both tools were developed from models found in similar studies.

Otis-Lennon score of student ability or intelligence quotient was taken from each participating student's school file. This test was administered the previous year, primarily as a tool for the County to use in choosing students for participation in a proposed enrichment program for the gifted in the 1986-87 school year.

This test result was used in this study to see if there was any correlation between posttest results and Otis-Lennon scores.

PROCEDURE

Assignment of Instructional Methods To Treatment Groups

The two band classes in Kitscoty each formed a treatment group, one following the lecture method, and the other the text-workbook method. The Kitscoty music teacher was given a choice as to which class he would assign which instructional method. The rationale he used was based on the pretest results. The 7B class had the largest number of students with varying degrees of cognitive knowledge with regard to music theory so he thought they would be more challenged with the individualized text-workbook approach. The 7A class with its more homogeneous knowledge of music fundamentals was taught as a group using the lecture method.

In Vermilion school, student placement in either the treatment group or the non-participating class was dependent on what options students chose. Both classes contained students who chose band and French and those who chose band and two other options. The class nearest in size to the Kitscoty groups was selected. The computer

approach was assigned to the Vermilion treatment group because computers were available.

Time Line

Because the emphasis of the band program is on the development of instrumental playing skills and music knowledge through participation, the theory unit was extended over a four month period in the Kitscoty school and a three and a half month period in Vermilion so that it could run concurrently with performance time. Kitscoty school provides three forty-minute band classes per week. Beginning in mid-September, the Kitscoty treatment groups carried out the theory unit during every third class period. Although Vermilion treatment group received four forty-minute band classes per week, the theory unit still extended over three and a half months since computer space for band students was limited. During most class periods, from one to fifteen students were sent to work on the computer while the rest of the class worked on instrumental playing skills. Students in this group were allowed to use the complementary text-workbook if they had trouble understanding the computer lesson.

Instructional Presentation

A simple pretest was administered to each treatment group to determine its knowledge of the concepts as set out in the Feldstein theory lessons. For the two

treatment groups involved in the individualized approaches, namely the computer method and text-workbook method, the results of the pretest were used to assign specific lessons to each student. Each subject was assigned twenty-eight lessons on concepts he did not seem to have an adequate knowledge of, according to pretest result. The researcher marked all pretests and assigned the lessons.

The lecture method treatment group was taught twenty-one lessons, equivalent to the twenty-eight lessons in Feldstein's text-workbook. The teacher followed the lecture notes, using the accompanying overhead transparencies to help teach concepts. The student hand-outs were marked and returned to the student as the course progressed as a form of feedback on student progress. In a theory period, the teacher covered three lessons and had students complete the corresponding hand-outs.

In the text-workbook method treatment group, the students worked through their assigned lessons at their own pace. Once they completed a lesson, they would hand it in for the teacher to mark and hand back.

The computer method students were familiarized with the computer functions and given access to the discs. Each received a copy of the lessons they were assigned to study on the discs.

As each treatment group completed the theory unit, the posttest, questionnaire and survey were given to the students. The lecture approach group was given questions on the posttest related to the first twenty-eight lesson concepts, the material they covered in the theory unit. The subjects in the other two treatment groups were given the questions on the test that correlated with the theory lessons each were assigned. The posttests were marked by the researcher.

The posttest was readministered five months after the initial posttest to see if the instructional approach affected retention of cognitive knowledge. This test was also marked by the researcher for all groups.

To effectively compare the achievement gain of each student from pretest to posttest and pretest to retention test, the pretest results were reevaluated so that a mark for each student was obtained only on the questions correlating with the questions assigned on the post/retention test.

STATISTICAL TREATMENT

The two individualized learning approaches assigned lessons to each student dependent on their pretest results. For the purposes of this study and to ensure that the measurement of achievement was performed on

subjects who were evaluated on the same material, only the forty-nine subjects who studied and were tested on Feldstein's first twenty-eight lessons were included. The subjects consisted of all twenty-eight students in the lecture group, sixteen students in the computer groups and eleven in the text-workbook group. Their data were culled from the whole group of subjects and put through tests for mean and standard deviation, analysis of variance; and, analyses of covariance of posttest by group, and retention test by group, with the pretest.

Furthermore, the pre and post/retention test questions were broken down into three categories: a) N = notation, dynamic and tempo symbols, b) V = note and rest values and time signatures, and, c) S = scales and intervals. The mean, standard deviation and analyses of variance were calculated for each test for categories N, V and S. Analyses of covariance between the posttest by group, and the retention test by group, with the pretest as covariate were done also. The Scheffe test was used to make pair-wise, post-hoc comparisons when a significant F was found with the analyses of covariance.

As a matter of interest, the same tests to measure mean and standard deviation, analyses of variance and analyses of covariance of posttest by group with the

pretest and retention test by group with the pretest were calculated on the data from all sixty-five subjects from the three treatment groups.

As student self-concept and learning structure preference was not dependent on the lessons students were assigned to study, data from all sixty-five subjects was used in this portion of the research. Analyses of variance of the means were performed on the results.

With data from the forty-nine subjects, and for interest, data from all sixty-five subjects, a Pearson correlation coefficient was used to see if there was a correlation between achievement and I.Q. (i.e. Otis-Lennon score). On reporting data on the intervening variables of gender, participation in private music lessons, enjoyment of elementary school music, parents' music background, and family attendance at music concerts; percentages from each treatment group were compared.

CHAPTER IV

RESULTS

Only data from 49 of the 65 subjects in the treatment group were used in the comparison of achievement gains portion of this study. To ensure continuity in subject matter tested for achievement gain, data from subjects in the two individualized approach groups who were assigned lessons other than Feldstein's first 28 lesson concepts were not included.

Although achievement gain results for N = 65 subjects cannot be reported in this study with a statistically significant degree of reliability, these data are provided here as a matter of interest. The chief reason is that one major concern of this study was to compare three approaches to teaching music fundamentals on achievement. If a reliable method of measuring achievement gain had been available for subjects taught different material, the researcher would have liked to include the data from all subjects.

COMPARISON OF ACHIEVEMENT GAINS BETWEEN GROUPS

In general, the results showed no statistical differences in achievement gain between the three treatment groups. An analysis of covariance of posttest results with pretest results as covariate did not indicate

a significant difference in means between treatment groups for N = 49. This same test indicated a significant difference in N = 65 although the more conservative Scheffe test used to make pair-wise, post-hoc comparisons because of the significant F, did not find a significant difference in means at the $P < .05$ level.

Hypothesis I: Because the F-ratio does not exceed the critical value at the .05 level of significance for N = 49 (Table I), the null hypothesis, that there will be no significant difference in music theory achievement between students taught by the three instructional approaches on the posttest, is accepted.

TABLE I

Analysis of Covariance of Posttest and Retention Test by Group With Pretest as the Covariate (Results for N = 65 are in Brackets)

Test	Source of Variation	DF	Mean Squares	F	P
Post	Between Groups	2 (2)	12651.159 (19996.540)	2.073 (3.507)	0.138 (0.036)
	Within Groups	45 (61)	6101.908 (5702.473)		
	Total	48 (64)	7148.189 (7086.118)		
Retention	Between Groups	2 (2)	18058.686 (19851.819)	2.837 (3.303)	0.069 (0.044)
	Within Groups	44 (60)	6365.587 (6009.397)		
	Total	47 (63)	7558.709 (7353.479)		

The retention test mean results indicated all three treatment group means were higher than their respective posttest means (See Table 6, Appendix E). An analysis of covariance of retention test results by group with pretest results did not indicate a significant difference in means between treatment groups at the $P < .05$ level for N = 49. This same test indicated a significant difference for N = 65. When the Scheffe test

was used to make pair-wise, post-hoc comparisons, no significant difference in means at the $P < .05$ level was found.

Hypothesis II: Since the F-ratio does not exceed the critical value at the .05 level of significance (Table I), the null hypothesis, that there will be no significant difference in music theory achievement between students taught by the three instructional approaches on the retention test, is accepted.

The pre, post and retention tests were broken down into three categories of questions, with N = questions dealing with notation, dynamic and tempo symbols; V = note and rest values and time signatures, and; S = scales and intervals. Analyses of covariance of posttest question categories N, V and S by group with the corresponding pretest question categories N, V and S did not indicate a significant difference in means between treatment groups at the $P < .05$ level for $N = 49$. A significant difference was found for $N = 65$ in posttest V at $P < .02$. The Scheffe test found a significant difference in means between the computer and text-workbook treatment groups ($N = 65$) at the .05 level.

Sub-Hypotheses Ia, Ib, and Ic: Since the F-ratios did not exceed critical values at the .05 level of significance, the null hypotheses that there will be no significant

difference in music theory achievement on Parts N, V and S between students taught by the three instructional approaches on the posttest, are accepted (Table 2).

Analyses of covariance of retention test question categories N, V and S did not indicate a significant difference in means between treatment groups at $P < .05$ level for $N = 48$. A significant difference was found for $N = 64$ in retention test V at $P < .03$. The Scheffe test did not find a significant difference in means at the .05 level.

Sub-Hypotheses IIa, IIb, IIc: Since the F-ratios did not exceed critical values at the .05 level of significance, the null hypotheses, that there will be no significant difference in music theory achievement on Parts N, V and S between students taught by the three instructional approaches on the retention test, were accepted (Table 2).

TABLE 2

Analyses of Covariance of Post and Retention Test N, V and S Groups With Pretest N, V and S as Covariates (Results for N = 65 are in Brackets)

Test	Source of Variation	DF	Mean Squares	F	P
Post N	Between Groups	2 (2)	409.528 (831.272)	0.777 (1.680)	0.466 (0.195)
	Within Groups	45 (60)	526.776 (494.768)		
	Total	48 (63)	583.278 (563.581)		
Post V	Between Groups	2 (2)	3559.747 (13646.932)	1.180 (4.513)	0.317 (0.015)
	Within Groups	45 (61)	3016.988 (3023.660)		
	Total	48 (64)	3024.244 (3388.610)		
Post S	Between Groups	2 (2)	23.312 (183.218)	0.171 (1.500)	0.843 (0.231)
	Within Groups	45 (61)	136.313 (122.161)		
	Total	48 (64)	135.466 138.523		

TABLE 2 - Continued

Test	Source of Variation	DF	Mean Squares	F	P
Retention N	Between Groups	2 (2)	432.778 (382.023)	0.784 (0.733)	0.463 (0.468)
	Within Groups	44 (59)	552.177 (382.023)		
	Total	47 (62)	591.638 (586.755)		
Retention V	Between Groups	2 (2)	6247.232 (11566.992)	2.219 (3.754)	0.121 0.029
	Within Groups	44 (60)	2815.880 (3080.934)		
	Total	47 (63)	2915.756 (3366.026)		
Retention S	Between Groups	2 (2)	0.765 (5.045)	0.006 (0.043)	0.994 (0.958)
	Within Groups	44 (60)	118.870 (116.793)		
	Total	47 (63)	117.293 (117.385)		

STUDENT SELF-CONCEPT AND MUSIC THEORY ACHIEVEMENT

As student self-concept is not dependent on which music fundamental questions individual students were assigned, data from all 65 subjects were used. Analyses

of variance of the means from each treatment group in response to questions one to four designed to measure student self-concept, indicated that there was no significant difference at the P < .05 level (See Table 3).

TABLE 3

Analyses of Variance of Each Questionnaire Response by Group

Question	F
Student Self-Concept	
1. My Teacher Likes Me As I Am.	0.58
2. My Teacher Cares About My Feelings	0.16
3. Other Students Like Me As I Am	1.02
4. Other Students Like To Help Me Learn	0.72
Attitude	
5. I Like To Work On My Own	0.65
6. I Like Teachers To Keep Students Quiet	* 6.77
7. I Like Teachers To Set Clear Goals for Me	2.36
8. I Like To Talk To The Whole Class About My Ideas	0.30
9. I Like Studying Music Theory This Way	1.75

* = P < .05

As there was no significant difference in achievement between the three treatment groups, Hypothesis III can be accepted.

Hypothesis III: Since there was no significant difference at the .05 level, the null hypothesis, that there will be no significant relationship between music theory achievement and student self-concept between students taught by the three instructional approaches, is accepted.

RELATIONSHIP BETWEEN ATTITUDES TOWARD CLASS LEARNING STRUCTURE AND MUSIC THEORY ACHIEVEMENT

The data from all 65 subjects were used as learning structure preferences was not dependent on the lessons each subject was assigned. Analyses of variance of the means from each treatment group in response to questions five to nine designed to measure attitudes toward class learning structure, indicated that there was no significant difference at the $P < .05$ level except for question six (See Table 3).

Hypothesis IV: As there was no significant difference in achievement between the three treatment groups, part of hypothesis IV can be accepted. The null hypothesis, that there will be no significant relationship between class learning structure preference and music theory achievement between students taught by the three instructional approaches, was accepted for responses to questions five

and seven through nine. The F-ratio for the response to question six exceeded the critical value at the .05 level of significance and the null hypothesis was rejected.

RELATIONSHIP BETWEEN SEVERAL INTERVENING VARIABLES AND MUSIC THEORY ACHIEVEMENT

Data were gathered on participating students' Otis-Lennon measurement of intelligence, gender, parents' music background, students' participation in private music lessons, students' enjoyment of their elementary school music program, and, family attendance at music concerts; to see if there was a correlation between these factors and each treatment groups' music fundamentals achievement.

TABLE 4

Pearson Correlation of Achievement and Otis-Lennon Results (Results for N = 65 are in Brackets)

	Posttest Results		
	Lecture	Text-workbook	Computer
Otis-Lennon	* .4813 N = 22 P = .012	.4031 N = 11 P = .110	-.0748 N = 16 P = .392
(Otis-Lennon)	* (.4813) (N = 22) (P = .012)	* (.4470) (N = 20) (P = .024)	* (.4452) (N = 17) (P = .037)

* = significant

Pearson correlation of achievement and Otis-Lennon results for N = 49 indicated a significant correlation for the lecture group. This same test on the results for N = 65 were statistically significant for all three treatment groups.

The percentage of each of the other intervening variables found in each treatment group is provided in Table 7 (Appendix F). A comparison of these percentages is found in Table 5.

TABLE 5

Significance of the Difference Between Extreme Percentages Among the Three Treatment Groups on Each Variable (P = .05 Unless Stated Otherwise)

Variables	DF	CR	t
Number of males	27 (43)	1.96 (1.33)	2.05 (2.02)
Private music lessons	18 (43)	1.73 *(3.17)	2.10 (2.71 at .01)
Parents have a music background	27 (42)	2.00 *(2.36)	2.05 (2.02)

TABLE 5 - Continued

Variable	DF	CR	t
Family attends concerts:			
a) often	37 (41)	1.16 (1.55)	2.03 (2.02)
b) some	26 (42)	* 2.23 *(2.57)	2.06 (2.42 at .02)
c) seldom	26 (42)	1.63 *(2.02)	2.06 (2.02)
d) never	26 (41)	0.67 (0.81)	2.06 (2.02)
Enjoyed elementary school music·			
a) yes	24 (38)	1.44 (1.13)	2.06 (2.03)
b) some	24 (38)	0.94 (0.75)	2.06 (2.03)
c) seldom	24 (38)	* 2.10 (1.60)	2.06 (2.03)

* = significant

The obtained difference was not significant at the .05 level of significance for the variables of gender, participation in private music lessons and parents' music background. There was a significant difference in the incidence of subjects who stated that their family attends concerts seldom and those who said they seldom enjoyed elementary school music, among the treatment groups.

DISCUSSION AND CONCLUSION

DISCUSSION OF RESULTS

Music fundamental achievement gain on the posttest and the retention test for N = 49 did not indicate a significant difference between the three treatment groups, each of which had been instructed using a distinct teaching approach. This finding reconfirms Franklin's view (1983) that computer assisted instruction may not teach better than other approaches (see Chapter III, p. 12). On the other hand, lack of significant difference in achievement gain among the three treatment groups does not substantiate Lindelow's (1983) statement that individualized instructional methods provide a more efficient learning process than does group instruction (see Chapter III, p. 15).

All three treatment group means were higher on the retention test than on the posttest, indicative that music fundamentals were retaught, to some extent, through practical application in the band classes. Another factor may be student maturation during the five month period between the administration of the two tests.

It is interesting to note that there is a significant response at the .05 level to the question, "I Like Teachers To Keep Students Quiet", one of the questions

designed to measure learning structure preference. The text-workbook treatment group had a mean of 4.25 as compared to 3.43 for computer group and 2.86 for the lecture group. Perhaps this high positive response by the text-workbook group was influenced by the individualized learning structure approach this method required. It appears that this would not be as high a need of the computer group which also used an individualized approach as the computer program required a more kinetic response from the students. The kinetic factor along with the built-in sound portion of the computer program ensured that this environment had more noise.

The researcher had expected to find a significant correlation between I.Q. and achievement. The text-workbook and computer groups from the subgroup of forty-nine did not show this correlation. Perhaps this meant that members in these two groups did not achieve as well as their I.Q. results would indicate they could do. Indeed, the computer group even had a negative correlation (see Table 4). This may be due to a lack of exposure to previous individualized instruction. As stated by Lindgren (1980) and Lindelow (1983), group instruction is more common than individualized instruction (see Chapter III, p. 10).

The results were significant for the difference

Between group percentages for the variables of enjoyment of elementary school music and family attendance at music concerts. It was interesting to note that the highest means, indicative of the more negative responses to the questions, were provided by the two groups in the Kitscoty school. Conversely, the lowest means were from the computer group in the Vermilion school who attended Vermilion Elementary. Could the differences in schools be an intervening variable?

INHERENT STRENGTHS AND WEAKNESSES IN THE STUDY

Strengths

Validity in this study was built in, as follows: a) all subjects were from the same school grade level, b) subjects used in the comparison of achievement (N = 49) had little background in music and they were tested on the same material with the same measurement tools, c) all pre, post and retention tests were marked by the same researcher, d) all testing tools and teaching materials not available from Feldstein were created by the one researcher, using Feldstein's materials for the sequence and concepts to be taught, and, e) the two teachers communicated on a daily basis regarding the study.

Weaknesses

As with any quasi-experimental design, there were several weaknesses in this study: a) the research was done in an educational setting so complete control of all external variables could not be assured, b) students were assigned to music classes, which became the treatment groups for this study, by the administrative personnel of each school; the researcher could not insure a random assignment of subjects to treatment groups; c) the researcher developed the materials for the lecture method, (regarding the latter, some difference may have occurred, in terms of content, from what Feldstein might have intended if he had designed such materials to correlate with his text-workbook and computer disks); d) the computer subjects chose band as one of their options, whereas band for the subjects in the lecture and text-workbook approaches was compulsory, e) the computer treatment group was in a different school, and had a different teacher than the other two treatment groups, and, f) each treatment group was relatively small, with the smallest group of subjects being eleven, and largest, twenty-one.

CONCERNS WITH EACH METHOD

Lecture Method

The major attribute of this method, in the opinion of the teacher who implemented it, was that the teacher was able to determine if the class did or did not understand a concept through oral questioning.

There were two major concerns that the teacher had in regard to the use of this method. He found that he had to set the pace of the class to accommodate the slower learners, consequently the quick learners sometimes became bored. The teacher felt the materials could have been improved by including a review of each concept as it was studied in the hand-outs.

Text-Workbook Method

The teacher felt that this approach had several beneficial features. The teacher's role changed to that of facilitator with time to help individual students. The students could work at their own pace. The teacher felt that the classroom was less stressful on both the teacher and students. Little discipline management was necessary with this approach.

The concern the teacher has with this method was that it was difficult to keep up with the marking. Another problem was that a student might hand in several

lessons at one time and make the same mistake in all of them.

Computer Method

One positive aspect of this approach was that it let the teacher continue working with the majority of the students on instrumental skills while a few individuals were working on the music fundamentals unit in the computer lab. Another positive aspect was that it provided a change of learning environment for music students.

There were several concerns raised by the teacher concerning this approach. The teacher was not always available to facilitate the learning of the students working on the computer as most of her time was spent with the majority of the class in the music room. The computer program used in this study could not provide the teacher with information regarding the progress of each child. One imperfection that has since been corrected on the computer discs is that lessons were grouped into four so that one could not do the second, third or fourth lessons without doing the preceding ones in the group. This factor, along with the program's mastery system where students had to get a specified number of exercises correct before they could go on, was a source of frustration for many students. At the end of a class period,

some students would not quite complete a lesson so they would have to begin all over again in the next class.

IMPLICATIONS FROM THE FINDINGS

The research began by asking the following questions:

a) Does an individualized course really enhance achievement? The review of the literature indicated that this approach is necessary to teach to each student's preferred learning style. As there were no significant differences between the three treatment groups in achievement gain, this study did not serve to augment this belief. In addition, the individualized treatment approaches were individualized in terms of material rather than teaching approach. They were not developed with students' preferred learning styles in mind.

b) Does one method obtain better results in teaching specific concepts than another one? No significant difference was found in achievement gain for any of the three catagories of questions on the music fundamentals tests.

c) Does one method augment retention over another? The results of this study did not indicate that retention was significantly higher for one of the treatment groups than for another.

d) Does student self-concept and learning structure preference affect the achievement of each treatment group?

Although the measuring tool for these variables was rather limited in its scope, the results did not indicate a significant relationship between student self-concept and learning structure preference and each treatment groups' achievement.

As research suggests that an eclectic approach to teaching is best (Sand and Kerr, 1982, Chapter II, p. 16) and as there were no significant differences in achievement gain between the three treatment approaches, these three teaching approaches could be combined to teach the music fundamentals as outlined in Feldstein's materials. The best combination of these approaches would be dependent on the results from a student learning styles diagnostic test, an important consideration in future research.

SUGGESTIONS FOR FURTHER RESEARCH

To effectively utilize teaching approaches and materials, an ongoing evaluative process would seem necessary as new teaching ideas and materials are constantly being developed. Positive aspects of these are readily advertised by publishers. The researcher questions whether active teachers are always involved in the evaluation of these products. It would seem evident that materials and teaching approaches are most effectively evaluated in the setting they were developed for, the classroom.

In regards to this particular study, further replications are necessary before these results can be validated for the student population. The researcher would suggest redesigning the study so as to, a) encompass a larger number of subjects, b) use the new Feldstein Practical Theory (1985) computer discs, and c) enlarge the pretest so that is more closely mirrors the posttest.

It would be interesting to enlarge both the student self-concept and learning structure preference measuring tools so that each could become the focus of a future study. This could be achieved in the form of a pre and post measurement of these factors with distinct teaching approaches applied to each treatment group.

SELECTED BIBLIOGRAPHY

Abrahsom, T. & Weiner, M. (1973). The Computer in Education. The Computer and Education of the Educational Review Series, 9.

Allvin, R. (Summer, 1971a). Computer Assisted Instruction: A Look at the Potential. Journal of Research in Music Education, 131-143.

Allvin, R. (August, 1971b). Computer Assisted Instruction Costs. Educational Technology II, 20-22.

Arenson, M. (1982(. The Effect of a Competency-Based Computer Program on the Learning of Fundamental Skills in a Music Theory Course for Non-Majors. Journal of Computer Based Instruction, 9, 55-58.

Bellard, J.C. (1985). Is the Self-Paced Instructional Program, Via Microcomputer-Based Instruction, the Most Effective Method of Addressing Individual Learning Differences? Educational Communication and Technology, 33 (3), 185-198.

Brocklehurst, B. (1971) Response to Music. London: Routledge & Kegan.

Brophy, J. (1984). Research on Teaching and Teacher Education: The Interface. Research in Teacher Education:
Current Problems and Future Prospects in Canada, 75-79.

Brown, P. (1981). Computer Based Learning. Forum of Liberal Education, 3. Washington: Association of American Colleges.

Burkett, T. A. (1982). The Challenge of Group Piano Teaching and The Reward. Music Educators Journal, 69.

Christ, R.L. (1968). Group Use and Other Aspects of Programmed Instruction: Final Report. Illinois: Illinois State University.

Deihl, N. (1971). Computer Assisted Instruction and Instrumental Music: Implications for Teaching and Research. Journal of Research in Music Education, 19, 299-306.

Dunne, R. & Keefe. (1983). Cited in The Emerging Science of Individualized Instruction. A Survey of Findings on Learning Time With Implications for Administrative Action. Eugene: University of Oregon.

Earl, Janet C. (1972). Recognizing the Individual: It's Important in Music Too. Music Educators Journal, 59, 22-24.

Feldstein, S. (1982). Practical Theory. Sherman Oaks, California: Alfred Publishing Co.

Franklin, J.L. (1983). What's a Computer Doing in my Music Room? Music Educators Journal, 69, 29-32.

Garrett, H.E. & Woodworth, R.S. (1960). Statistics in Psychology And Education (3rd Ed.). New York: Longmans, Green & Co.

Glaser, R. & Lomposcher, J. (1982). Cognitive and Motivational Aspects Of Instruction. New York: North-Holland Pub. Co.

Gleason, G.T. (1967). The Theory and Nature of Independent Learning. Scranton, Penn.: International Textbook Co.

Hinkle, D.E. et all. (1979). Applied Statistics for the Behavioral Sciences. Boston: Houghton Mifflin Co.

Hofsetter, R. T. (1979). Microelectronics and Music Education. Music Educators Journal, 65, 38-45.

Hullfish, W. R. (1972). A Comparison of Two Computer-Assisted Instructional Programs in Music Theory. Journal of Research in Music Education, 20, 354-361.

Johnston, D.W. et al. (1976). Effects of Cooperative Versus Individualized Instruction on Student Prosocial Behavior, Attitudes Toward Learning and Achievement. Journal of Educational Psychology, 68, 446-452.

Kapfer, M.B. (1970). The Evolution of Musical Objectives. Music Educators Journal, 56, 61-63.

Lall, G.R. & Lall, B.M. (1983). Ways Children Learn: What Do Experts Say? U.S.: Charles C. Thomas.

Lepper, M.R. & Chabay, R.W. (1985). Intrinsic Motivation And Instruction: Conflicting Views on The Role of Motivational Processes in Computer-Based Education. Educational Psychologist, 4, 217-230.

Lindelow, J. (1983). The Emerging Science of Individualizing Instruction: A Survey on Learning Styles, Brain Research, and Learning Time With Implication For Administrative Action. Eugene: University of Oregon.

Lindgren, H.C. (1980). Educational Psychology in the Classroom, (3rd Ed.). U.S.A.: Oxford University Press.

Logan, F.A. & Ferraro, D.P. (1978). Systematic Analysis of Learning and Motivation. U.S.A.· John Wiles & Sons, Inc.

Mason, E.J. & Bramble, W.T. (1978). Understanding and Conducting Research. U.S.A.: McGraw-Hill.

McCarthy, J.F. (1980). Individualized Instruction, Student Achievement and Dropout in an Urban Elementary Instrumental Music Program. Journal of Research in Music Education, 28, 59-61.

Murphy, J.W. & Pardeck, J.T. (1985). The Technological World-View and the Responsible Use of Computers in the Classroom. Journal of Education, 167, 98-108.

Ofiesh, G.D. (1970). Technology, the Road to Freedom. Music Educators Journal, 56, 45-48.

Phelps, R.P. (1976). Seminar In State Music Supervision: Final Report. New York: New York University.

Ploeger, F.D. (1975). An Investigation of the Effects of Selected Aspects of Individualized Instruction on the Achievement of Students. ERIC Document.

Publication Manual of the American Psychological Association. (3rd Ed.) (1983). Washington.

Schwandt, L.C. & Wiederanders, D.E. (1985). Microcomputers and the Ultimate Goal of Education. Educational Technology, 25, 32-35.

Spohn, C.L. (1969). Individualizing Instruction Through New Media Research. Journal of Research in Music Education, 17, 94-99.

Thiebe, E.H. (1972). Children are Different. Music Educators Journal, 59, 21-22.

Weinert, F.E. (1979). Psychology and Instruction: Historical Perspectives. Found in Cognitive and Motivational Aspects of Instruction. New York: Harper and Row.

Wingfield, A. (1979). Human Learning and Memory: An Introduction. New York: Harper and Row.

APPENDIX A

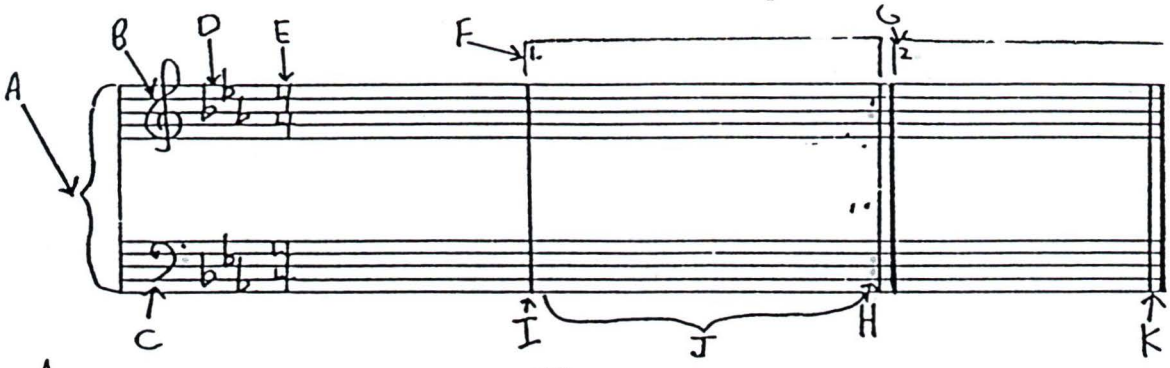
PRETEST OF MUSICAL KNOWLEDGE

The purpose of this test is to determine your knowledge of music and place you at the appropriate level in the theory component of the music program. The results of this test will <u>not</u> be used for grading purposes.

Answer as much of the exam as you can to the best of your ability. If you do not know an answer, go on to the next one. If you have a question, please raise your hand.

* *

1. Name the parts of the musical example



A. _____ or _____

B. _____ or _____

C. _____ or _____

D. _____

E. _____

F. _____

G. _____

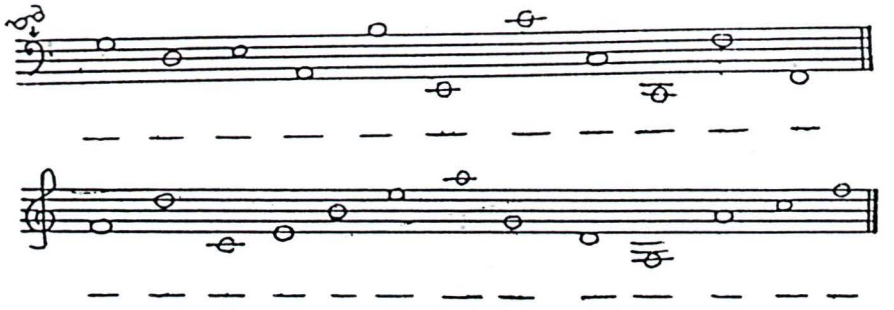
H. _____

I. _____

J. _____

K. _____

2. Place the correct letter name under each note in the space provided.



3. 

A. The top number indicates that_____

_____.

B. The bottom number tells us_____

_____.

4. How many beats does each note value receive? ($\frac{4}{4}$ time)

A.  = B.  = C. = D. =

5. How many beats does each rest value receive? ($\frac{4}{4}$ time)

A.  = B.  = C. = D. =

6. How many counts do each of these notes receive? ($\frac{4}{4}$ time)

A.  = B. =

7. Name the curved line in example A and briefly explain its function.

_____

Name the curved line in example B and briefly explain its function.

_____

8. Name the symbol found in front of the note in example A and explain its function.

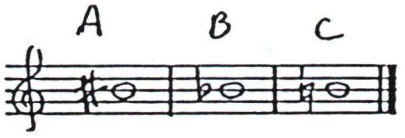
_____

Name the symbol found in front of the note in example B and explain its function.

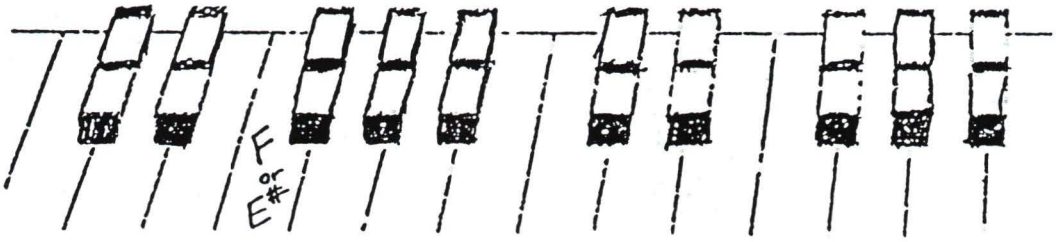
_____

Name the symbol found in front of the note in example C and explain its function.

_____



9. On each key, place all of its possible names. An example has been provided.



* * * * * * * * * *end of section one* * * * * * * * * *

10. Indicate whether the distance between the two note names is a whole or a half step (tone or semitone)

F to G _____

B to B _____

E to F _____

11. Write out the pattern of whole and half steps that form a major scale.

_____

12. Give an enharmonic name for the note B_____

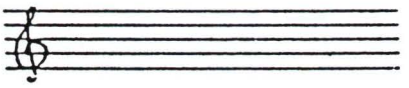
13. Define a tetrachord_____.

14. The following examples are key signatures of major scales. Name the correct key for each example.

    A. four sharps_____

    B. two flats_____

15. Write out the key signature for A major on the staff provided.



16. How many sixteenth notes equal one quarter note?_____

17. Draw a sixteenth rest_____

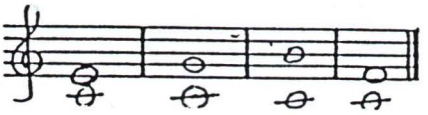
18. In $\frac{4}{4}$ time, the following note equals how many counts?

 = _____

19. ¢ is known in music as_____or_____

_____. What note value now gets one beat?_____

20. Name the intervals indicated. Use P for perfect, M for major.



21. 

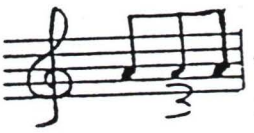
    A. The top number indicates that_____

    _____

    B. The bottom number indicates that_____

    _____

22. Identify the rhythmic figure in the example



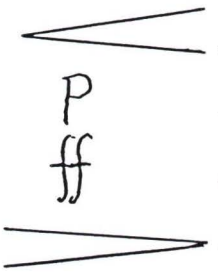
_____

How many eighth notes would this figure take the place of in $\frac{4}{4}$ time?_____

23. Define the musical term "syncopation"_____

_____

24. Define the following dynamic markings: (use English Definitions).



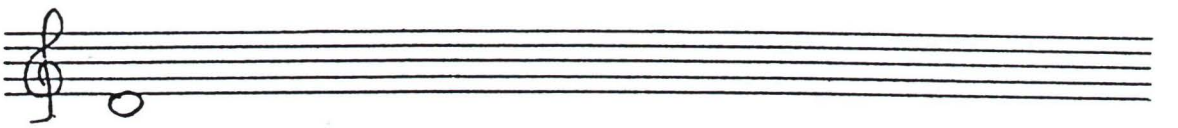
_____ mf _____

p _____ pp _____

ff _____ mp _____

_____ f _____

25. Build a chromatic scale (ascending only) beginning with the given note.

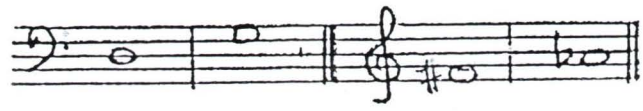


26. Name the following intervals. Use dim. for diminished, aug. for augmented and min. for minor (ie. aug. 7)

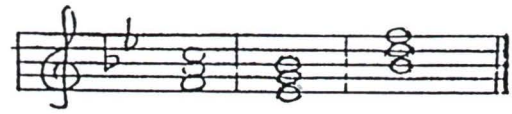
___ ___ ___ ___ ___

* * * * * * * * * * *end of section two* * * * * * * * * * *

27. Build major triads above the following notes.



28. Under the following triads, indicate the chord's relationship to the key by writing its roman numeral.



___ ___ ___

(0) 29. Provide a definition of the following signs and abbreviations.

D.C. (Da Capo)_____

D.S. (Del Segno)_____

legato_____

fine_____

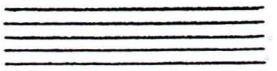
30. The following is the key signature for _____ major and _____ minor.

31. Name the three chords from a major scale that will harmonize all the notes in that scale.

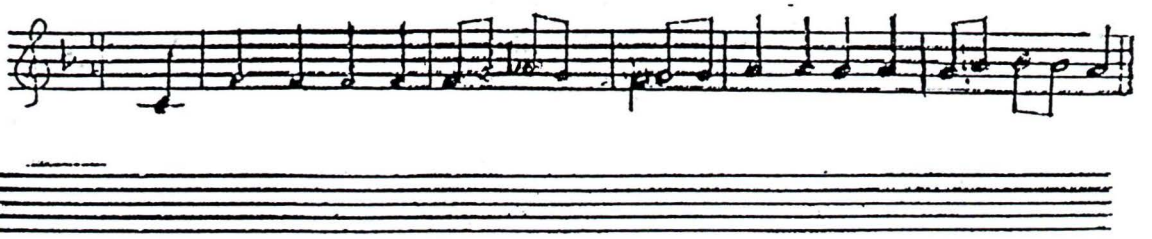
_____(use roman numerals)

32. A Dominant Seventh chord consists of a root, major 3rd, perfect 5th, and _____7th. It usually moves to the _____chord.

33. Write a G major triad in first inversion.



34. Transpose the following melody to the key of B.



(0)35.

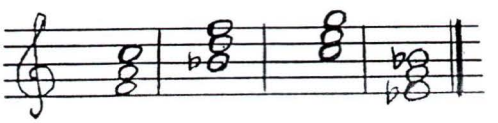
A. The top number indicates that____

_____

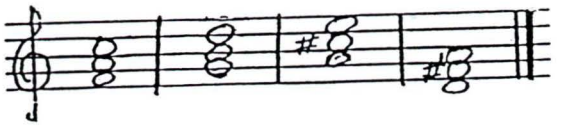
B. The bottom number tells us_____

_____

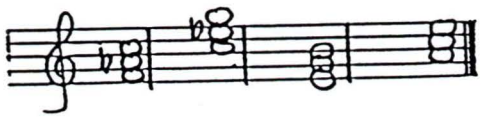
36. Add incidentals to make these major triads minor.



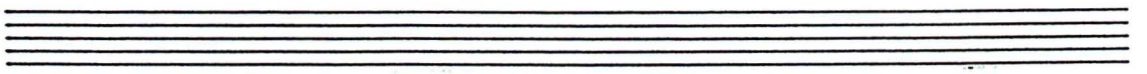
37. Add accidentals to make these major triads augmented.



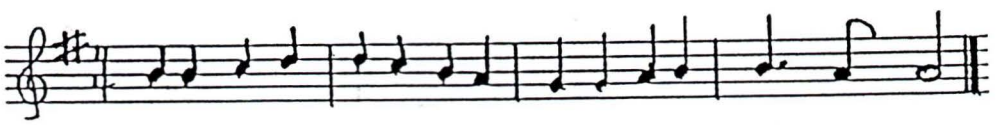
38. Add accidentals to make these minor triads diminished.



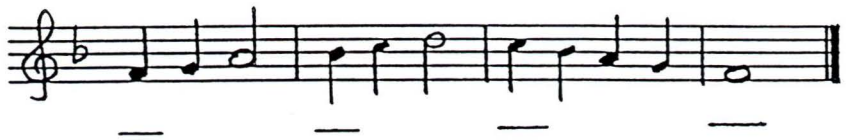
39. Write the I, vi, ii, V7, I progression in the key of C



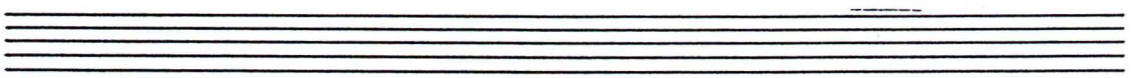
(0)40. Harmonize the melody below by adding a second part written a third lower than the melody.



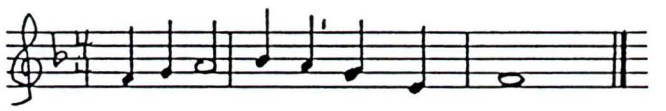
41. Harmonize the following melody by indicating the chord you would use to accompany each measure. (Use roman numerals)



42. Write E minor harmonic scale ascending using whole notes in the bass clef.



43. Circle the passing tones in the following example.



APPENDIX B

11/84 THEORY UNIT FINAL name_____

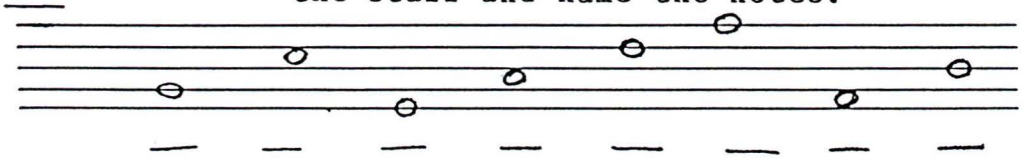
Use your theory assignment sheet to check off in the left hand column the questions which relate to the lessons you were assigned. Your teacher will check that you have done this as you write the test.

Read each question carefully. Do only those questions you have checked off. Best of Luck.

Lesson 1 ___ 1. Draw a staff and number the lines. 2

2. On the above staff, place a note on the bottom line and one on the third line. Place an X on the note that will sound the highest. 2

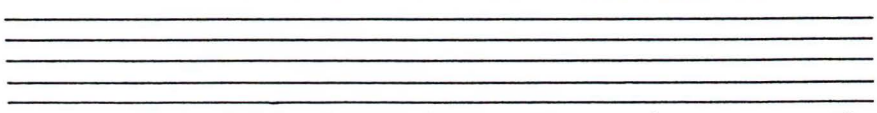
Lesson 2 ___ 3. Draw the treble clef at the beginning of the staff and name the notes.



___ ___ ___ ___ ___ ___ ___ ___ 9

4. The treble clef establishes the note___ on the _____ line. 2

Lesson 3 ___ 5. Draw the bass clef at the beginning of the staff and draw the notes indicated.



F D G A B E C F 9

6. The bass clef establishes the note ___ on the _____ line.

Page 2

Lesson 5 ___

7. Draw a whole note._____ It receives ____ counts.

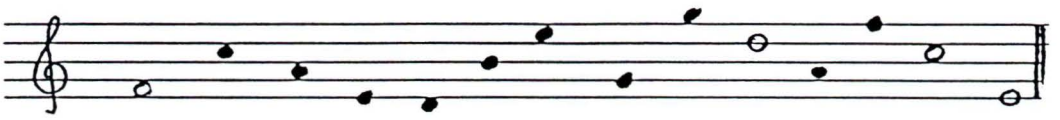
2

8. Four quarter notes equal one _____note.

9. One half note equals_____quarter notes.

4

10. Draw stems on the notes indicated.



14

Lesson 6 ___

11. Draw a bass clef, divide the staff into five measures, add two half notes in each measure, name the notes, and end the staff with a double bar line.

17

Lesson 7 ___

12. The bottom number of a time signature shows what kind of note gets____beat.

3

13. In $\frac{4}{4}$ time, there are___ beats in each measure and a_____note gets one beat.

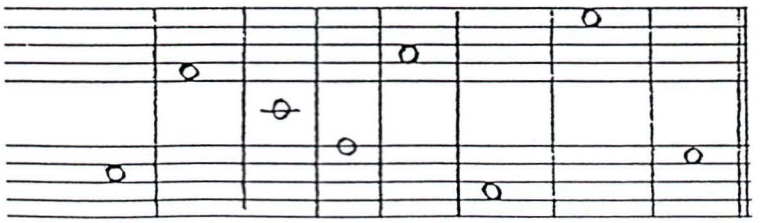
4

14. Add the bar lines in the following example

4

Lesson 9 ___

15. Draw the brace, treble clef, bass clef and name the notes indicated.

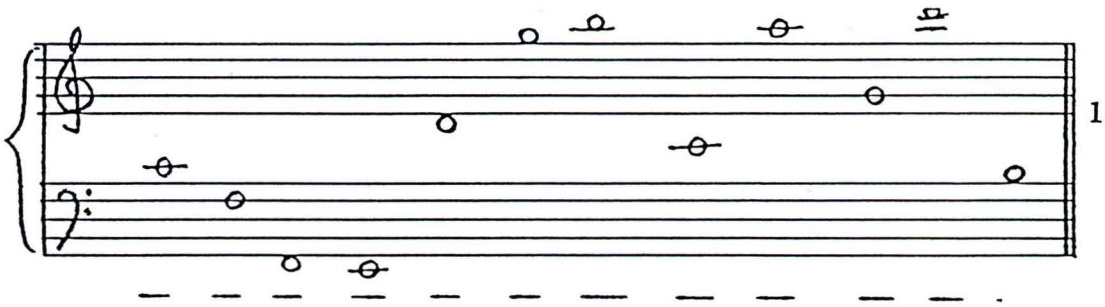


11

16. Add the time signature to the above example.

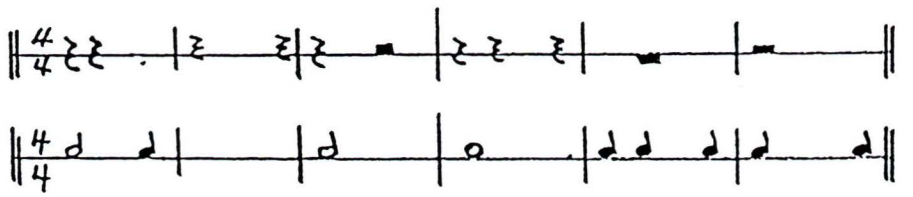
2

Lesson 10 ___ 17. On the grand staff below name the indicated notes.



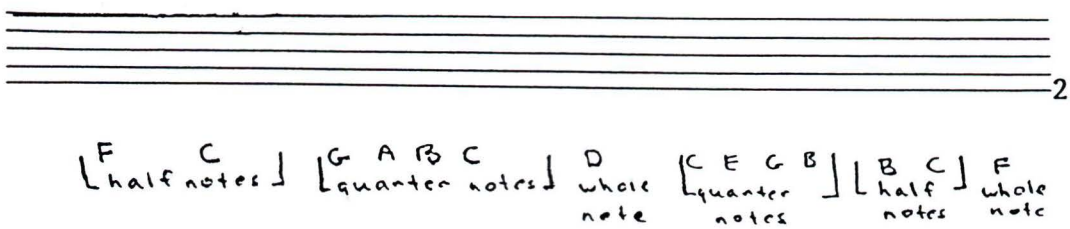
12

Lesson 11 ___ 18. Fill in the missing beats with the appropriate rests. Use only one rest in each measure.



12

19. Draw the brace, treble clef, bass clef, and draw the notes indicated. If the pitch indicated can be drawn in more than one place on the staff, choose which one you want to write.



23

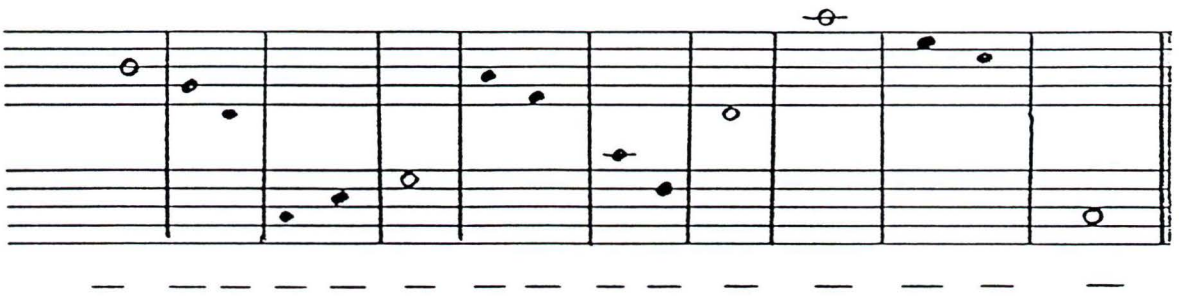
Lesson 13 ___ 20. Fill in the missing beats with notes or rests, then add the counts under each measure.

16

Page 4

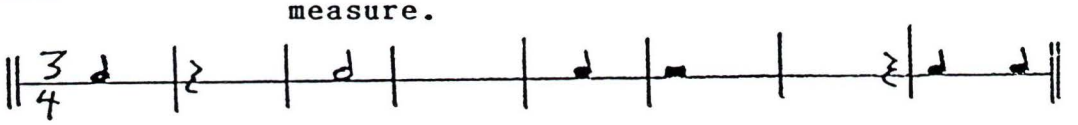
21. Draw the brace, treble clef, bass clef and time signature, then name the notes and add the stems.

35



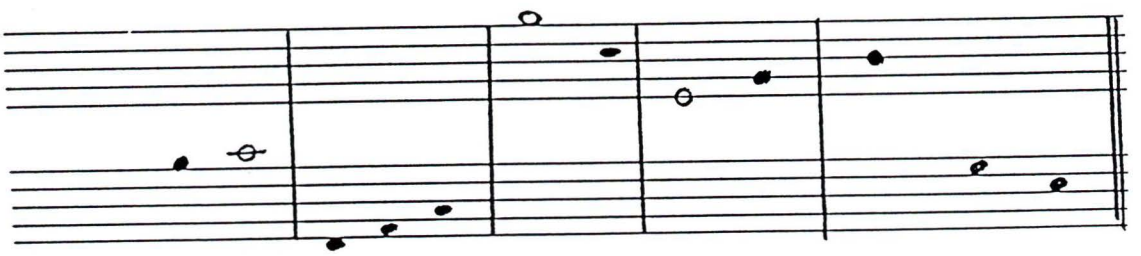
Lesson 14 ___

22. Fill in the missing beats with notes or rests, then add the counts under each measure.



16

23. Draw the brace, treble clef, bass clef and a time signature. Then name the notes and add stems where needed.

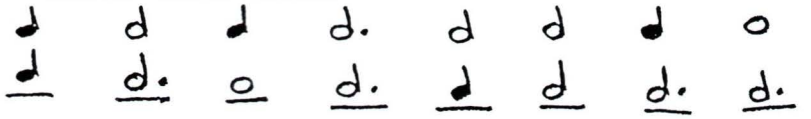


29

Lesson 15 ___

24. A dot placed after a note adds_____the value of the original note.

25. Add the number of counts and write the sum under each line.



8

Page 5

26. Draw the bass clef, name the indicated notes, add the bar lines and double bar line at the end of the line.

20

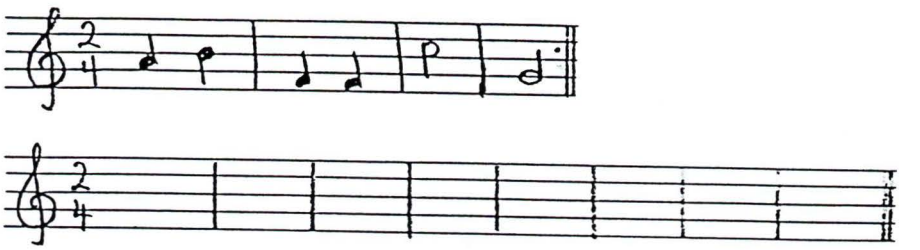
Lesson 17 ___ 27. Write the word tie or slur describing the curved line in each measure

7

28. A slur indicates that the music is to be sung or played as _____ as possible.

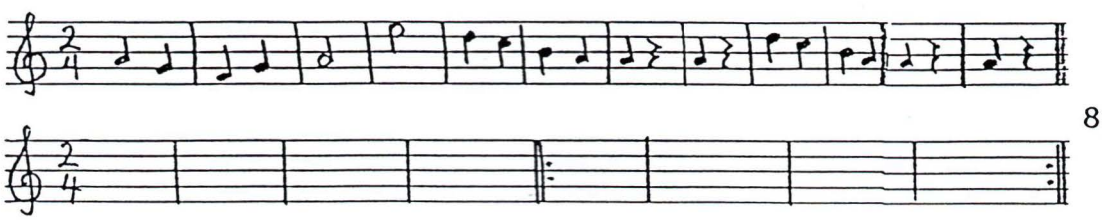
1

Lesson 18 ___ 29. On the blank staff below, write the indicated piece of music as it would appear without the repeat signs.



8

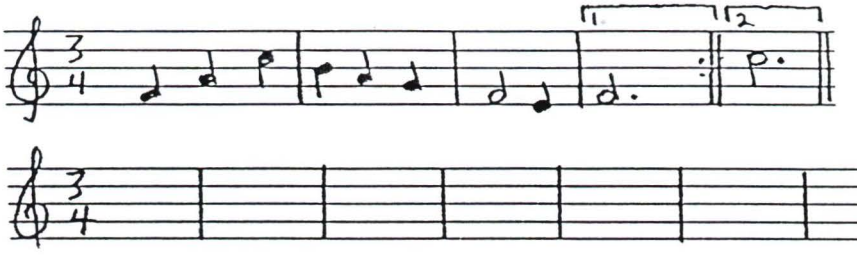
30. On the blank staff below, rewrite this piece of music using a repeat sign.



8

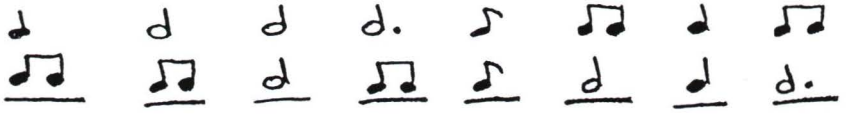
Page 6

Lesson 19 ___ 31. One the blank staff, write this piece of music as it would appear without the first and second endings.



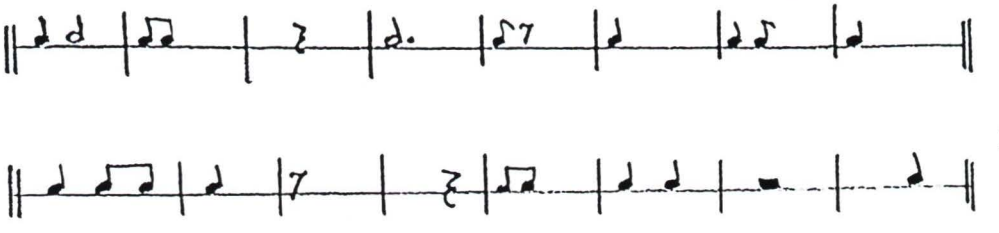
8

Lesson 21 ___ 32. Add the number of counts and write <u>one note</u> equal in value to the sum.



8

Lesson 22 ___ 33. The first measure in each of the lines below is complete. Add the correct time signature and complete the remaining measures. Write in the counting. Then count the beats and clap the rhythm.

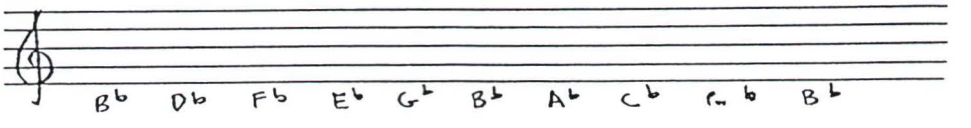


16

Lesson 23 ___ 34. Add the bar lines in the following example, then add the counts under each measure.

7

Lesson 25 ___ 35. Draw the notes indicated.



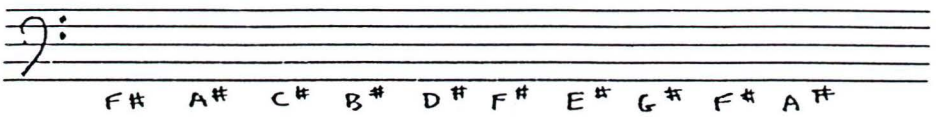
10

Page 7

Lesson 26 36. Draw the notes indicated.

___

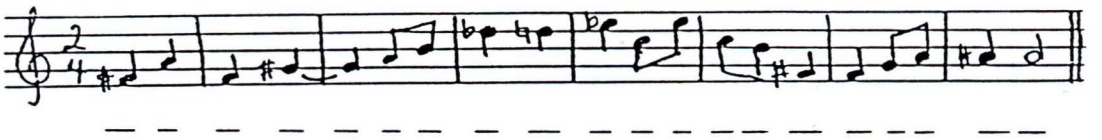
10



Lesson 27 37. Write the names of the notes indicated.

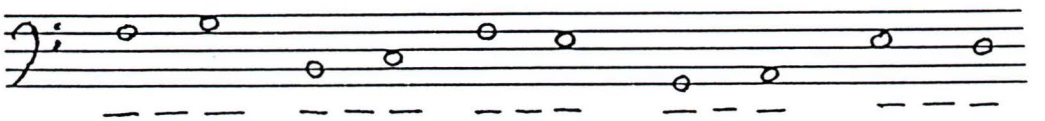
___

20



Lesson 29 38. Name the note and indicate the distance between them. Whole step (w), half step (1/2).

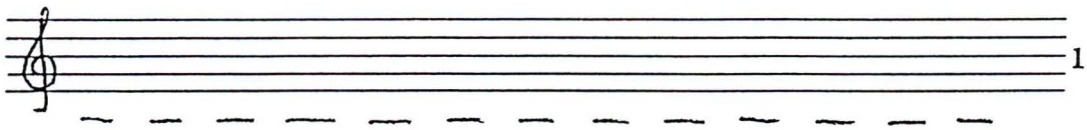
___



15

Lesson 30 39. Write the ascending version of the chromatic scale starting on the note C, then name the notes.

___



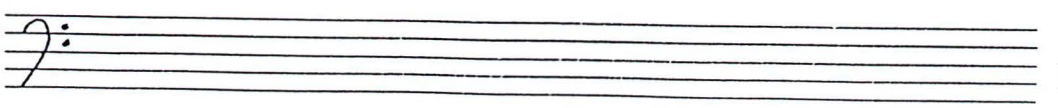
13

Lesson 31 40. The major scale is comprised of _____ tetrachords.

___

2

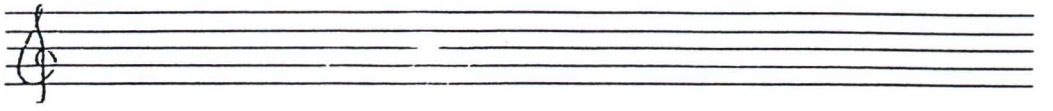
41. Write a C scale and indicate the whole (w) or half (1/2) steps between each note.



15

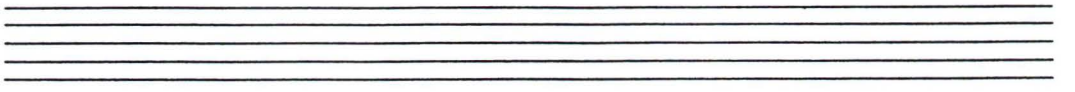
Page 8

Lesson 33 ___ 42. Draw eight notes on the staff from F to F. Check the whole and half step formula and add any necessary accidentals to make these eight notes an F major scale.



8

Lesson 34 ___ 43. Write a major scale beginning on D. Indicate the whole and half steps. Don't forget to add the necessary accidentals.



15

Lesson 35 ___ 44. True or false:

__ The key signature is placed at the beginning of a composition, immediately following the clef.

__ The amount of sharps and/or flats in the treble clef signature is different from the amount for the same key in the bass clef.

2

Lesson 37 ___ 45. Write the sharps in the order they are added to the key signatures.

7

_____ _____ _____ _____ _____ _____ _____

46. A fifth above C is the key of___which contains___sharp.

2

47. Write the flats in the order that they are added to the key signature.

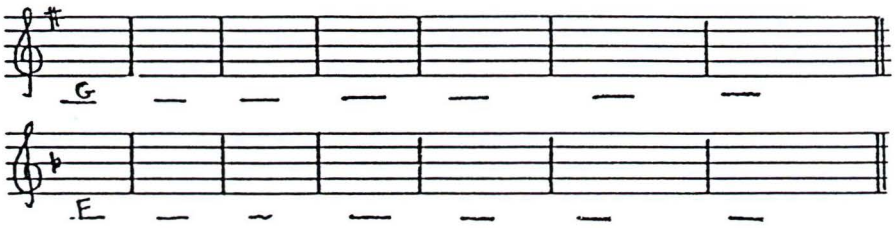
_____ _____ _____ _____ _____ _____ _____ 7

48. A fifth below C is the key of___which contains___flat.

2

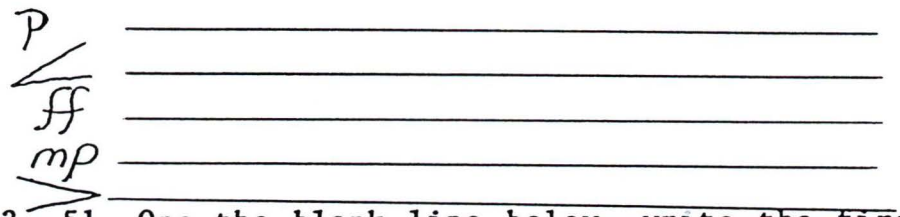
Page 9

Lesson 39 ___ 49. Write the name of the keys in the circle of 5ths under the staff. Then write the key signatures of all the keys.



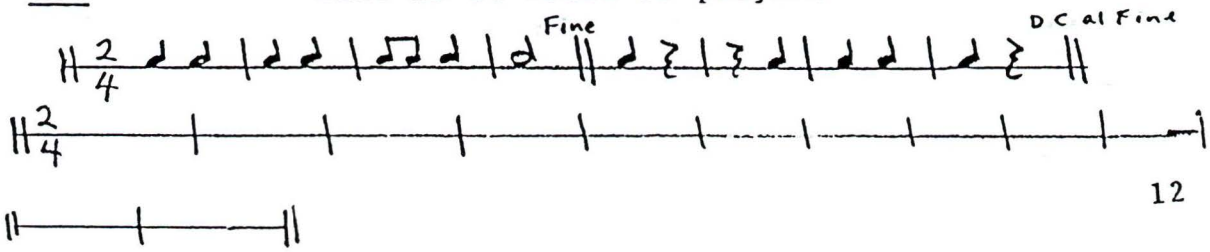
24

Lesson 41 ___ 50. Define the following dynamic markings in English.



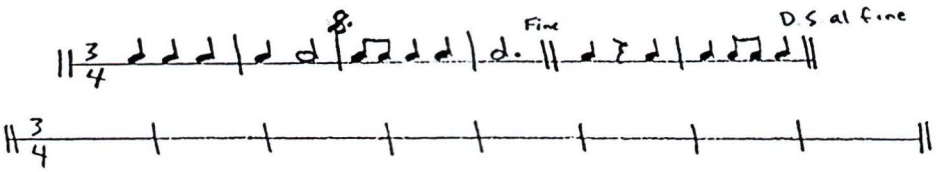
5

Lesson 42 ___ 51. One the blank line below, write the first line as it would be played.



12

52. On the blank lines below, write the first line as it would be played.



8

Lesson 43 ___ 53. Draw the symbol that means:

_____hold the note longer than its normal value.

_____play the note a little louder

Page 10

Question 53 (continued)

_____hold the note for its full value.

_____play the note short.

54. Define the following terms:

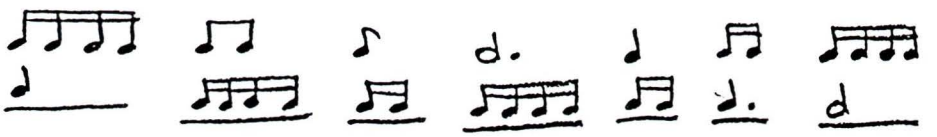
7

a) Allegro_____

b) Adagio_____

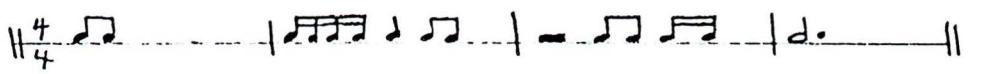
c) Accelerando_____

Lesson 45 ___ 55. Add the number of counts and write the sum under each line.



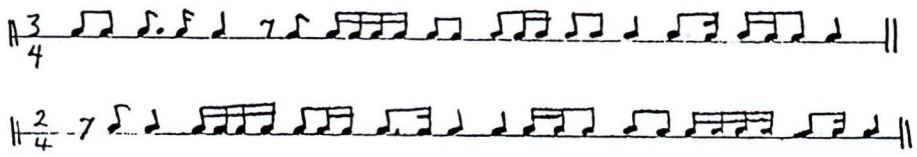
7

Lesson 46 ___ 56. Fill in the missing beats with the appropriate rests using only quarter, eighth and sixteenth rests.



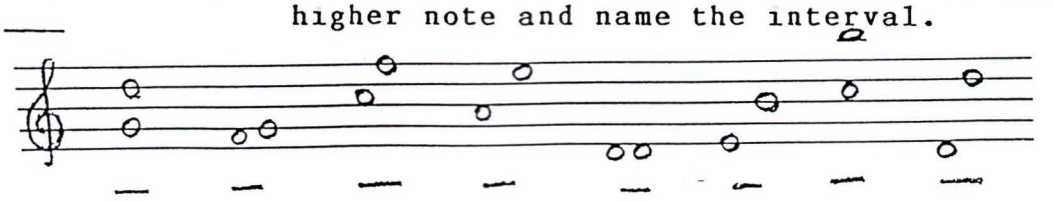
4

Lesson 47 ___ 57. Add the bar lines in the following examples then add the counts under each measure.



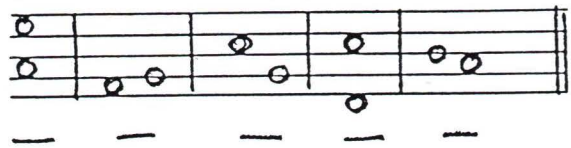
18

Lesson 49 ___ 58. Count the distance from the lower to the higher note and name the interval.



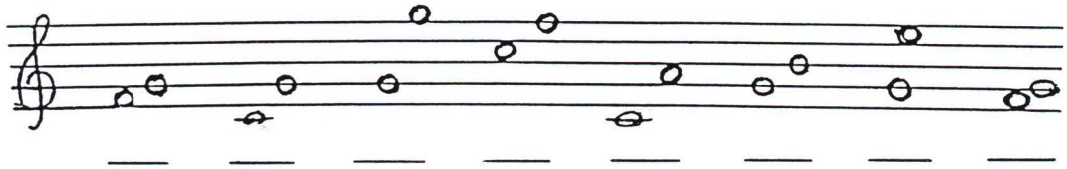
8

59. Indicate whether each interval is harmonic (H) or melodic (M)



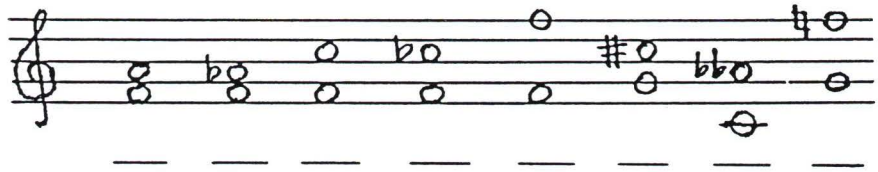
5

Lesson 50 60. Name the intervals indicated. Use P for perfect, M for major.



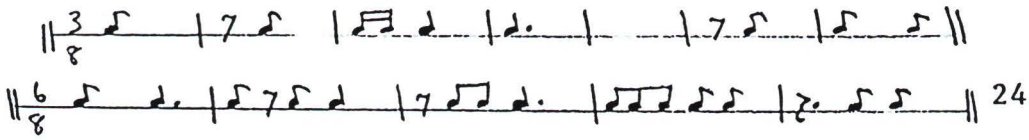
8

Lesson 51 61. Name the intervals indicated.



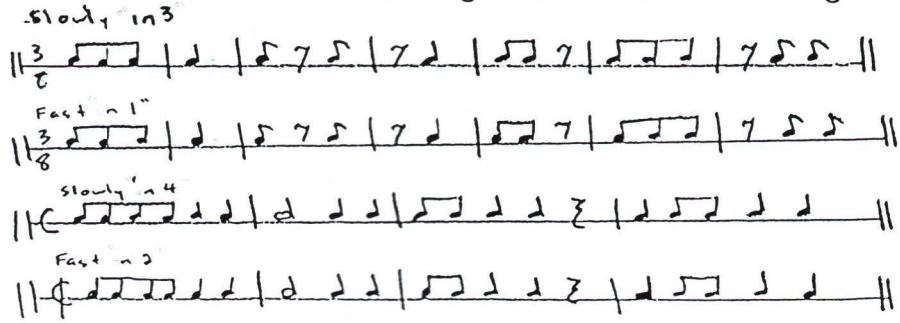
8

Lesson 53 62. Fill in the missing beats with notes or rests, then add the counts under each measure.



24

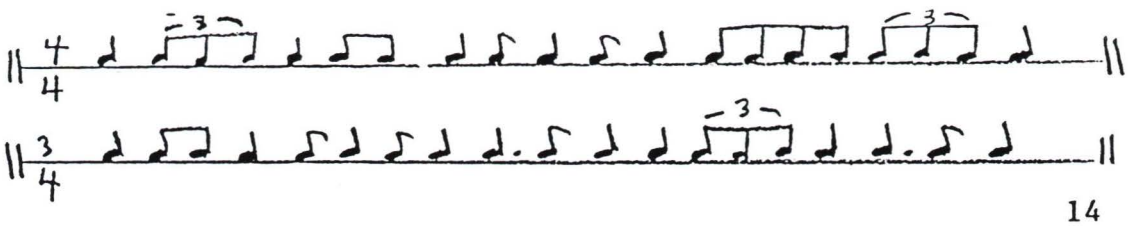
Lesson 54 63. Write the counting under the followng lines



22

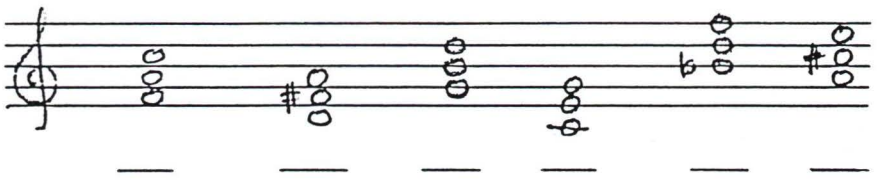
Page 12

Lesson 55 ___ 64. Add the bar lines in the following lines and write the counting under each measure.



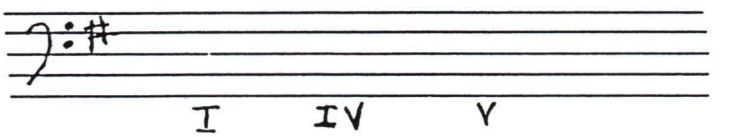
14

Lesson 57 ___ 65. Name the following major triads (letter name).



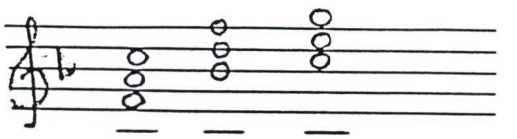
6

Lesson 58 ___ 66. Write the chords indicated in the Key of G.



3

67. Give the letter names of each of the following chords.

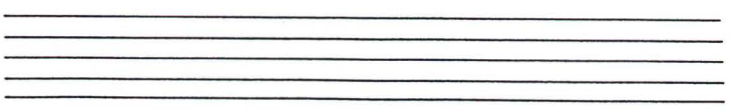


3

Lesson 59 ___ 68. The natural movement from one chord to another is called a_____.

2

69. Write the I,IV,V,I progression in the key of Eb. Then give the letter name of each chord.

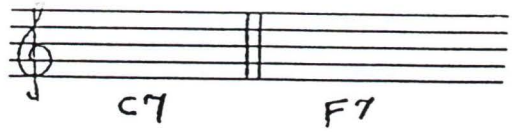


8

Page 13

Lesson 61 ___ 70. The dominant 7th chord is a 4 note chord that gets its name from its place in the key. It is built on the___note of the scale

71. Write the following chords: 1

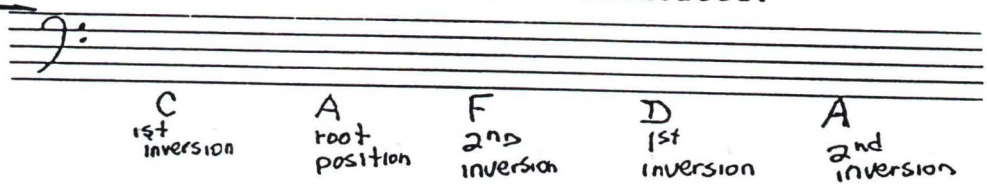


2

72. Write the chord progression indicated and write the letter name of each chord above the staff.

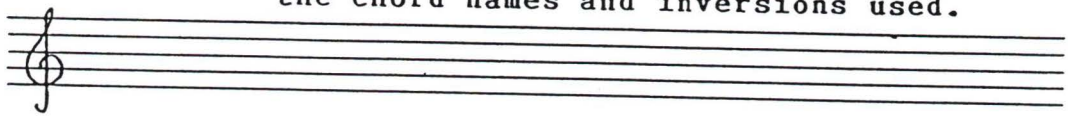
8

Lesson 62 73. Write the chords indicated:



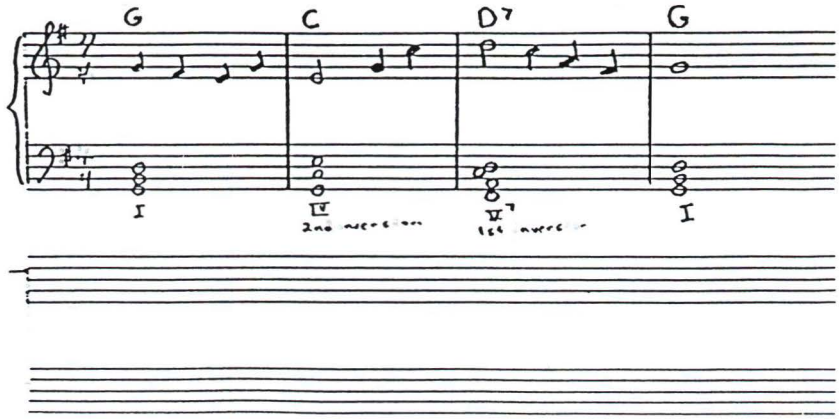
5

Lesson 63 ___ 74. Write the I.IV.V7,I progression in the key of G using smooth voice leading. Indicate the chord names and inversions used.



8

Lesson 65 ___ 75. Transpose the following melody and harmony to the key of C.



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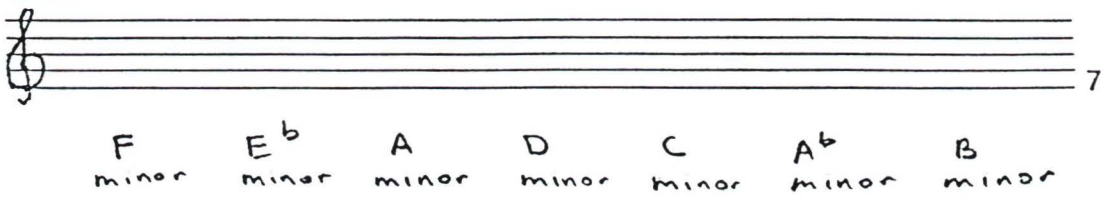
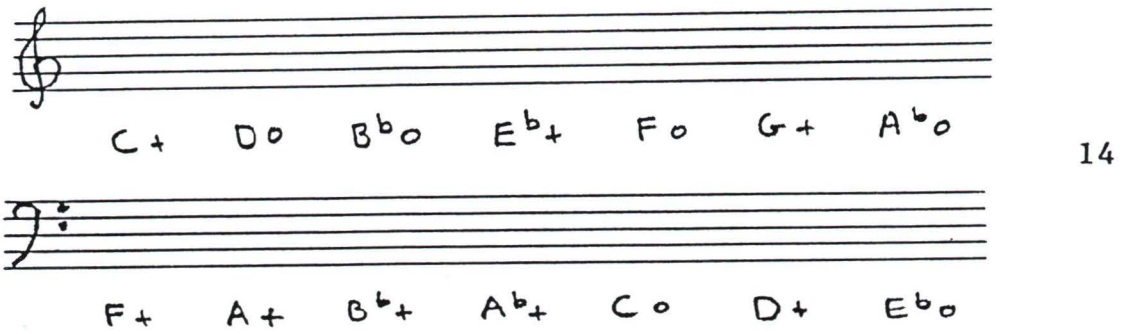
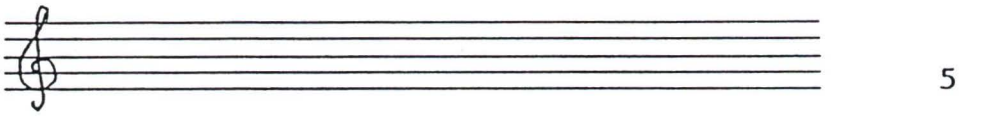
Lesson 66 76. Write the following minor triads:



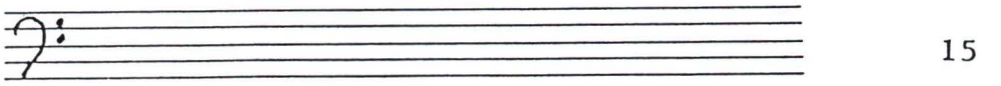
Lesson 67 77. Write the following triads:



Lesson 69 78. Write the I,vi,ii,V7 progression in the Key of F.

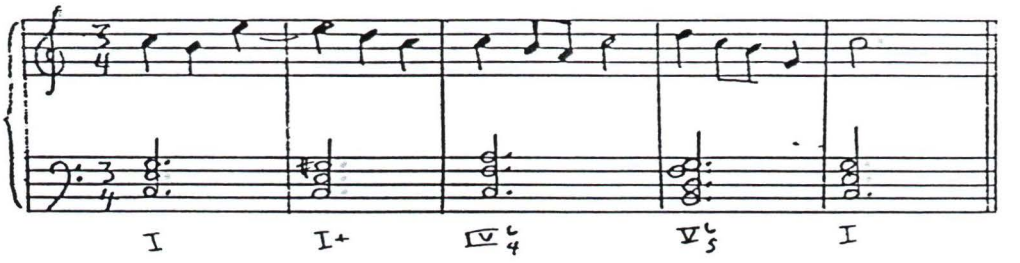


Lesson 70 79. Write the I,vi,ii,V7 progression in the key of Bb using smooth voice leading. Indicate the chord names and inversions used.



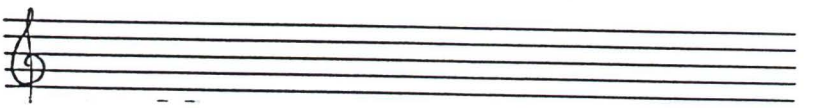
Page 15

Lesson 71 ___ 80. Transpose this melody and harmony to key of G.



10

Lesson 73 ___ 81. Write the G natural minor scale.

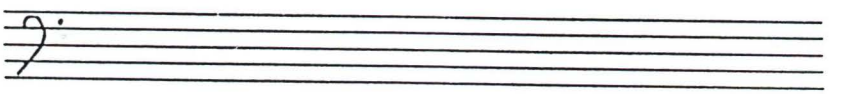


8

82. The relative minor of Bb is _____.

1

Lesson 74 ___ 83. Write C Harmonic Minor.



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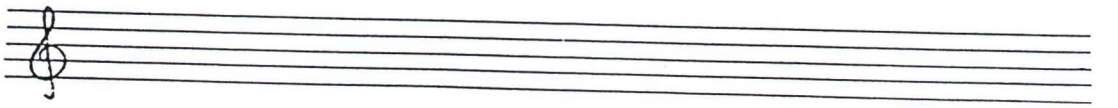
Lesson 75 ___ 84. Write the ascending and descending form of D melodic minor scale.



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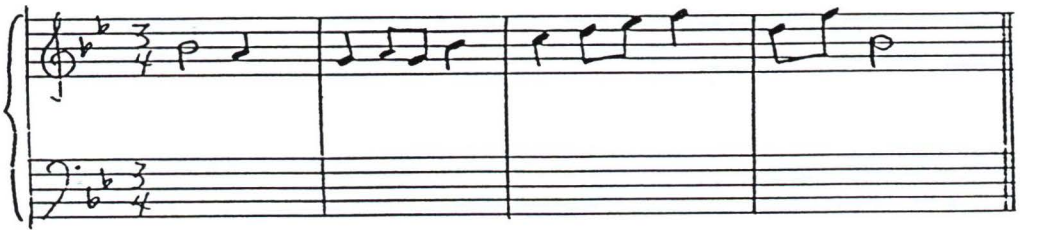
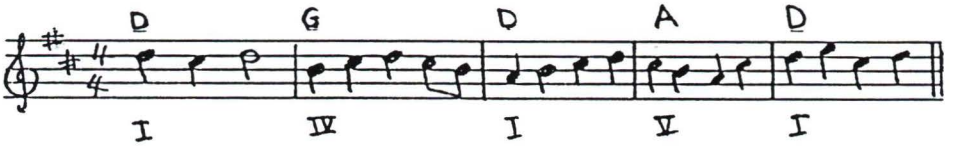
Lesson 77 ___ 85. Harmonize the following melody. Place the name of the chord above the top staff and write the notes of the chord on the bottom staff.



8

Lesson 78 ___ 86. Circle the passing tones and the neighboring tones in the following melody.



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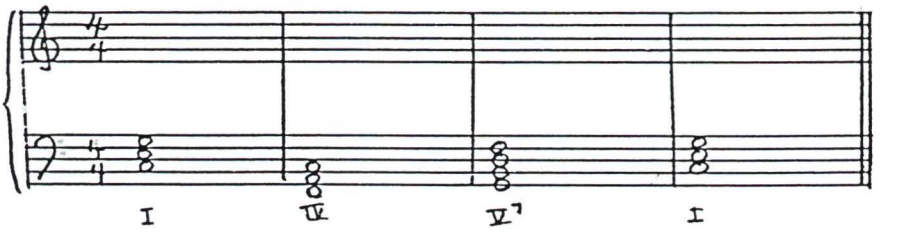
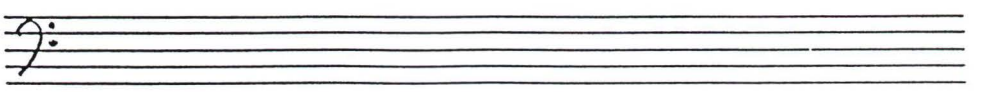
Lesson 79 ___ 87. Compose a melody over the existing harmony.



4

Lesson 81 ___ 88. Write the i,iv,VI,i chord progression in key of E minor, using smooth voice leading. Indicate the inversions used.



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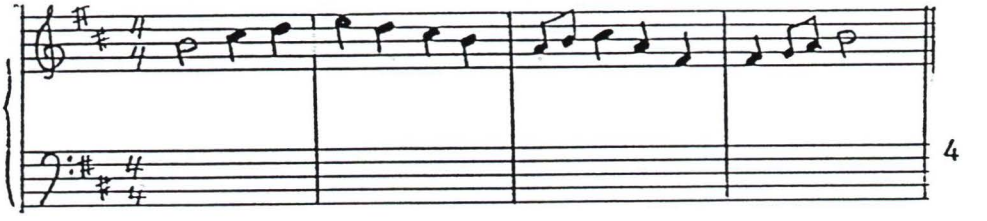
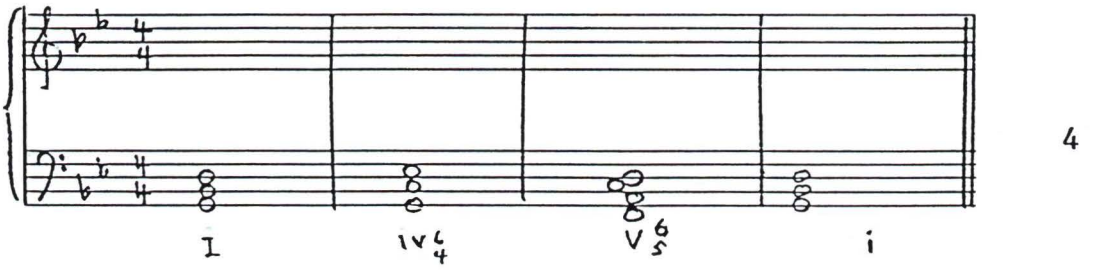
Lesson 82 ___ 89. Harmonize the following melody (minor key) and use smooth voice leading. Indicate the inversions used.



Lesson 83 ___ 90. Compose a melody over the existing harmony (minor key).



APPENDIX C

SURVEY

Name _____

Age _____

Do you live in town?_____, or country?_____

Sex _____

Name of the last elementary school you attended_____

Do you play a musical instrument_____ If so, how many years have you played? _____

Does your mother play a musical instrument?_____ Does she sing? _____

Does your father play a musical instrument?_____ Does he sing? _____

Have you taken private music lessons?_____If so, for how long? _____, and which instrument? _____.

In elementary school, did you perform in the choir? _____

Have you performed in groups outside of school?_____

church_____ summer camp_____ other_____

Did your elementary school classes sing: daily___ often____ seldom___ never___

Did you enjoy music instruction in elementary school?_____

Do you like to sing?_____

Did you learn to read music: in school____ from private teacher____ at home____ other____

Do you listen to recorded music in your home?_____

often___ sometimes___ seldom___ never___

Is this recorded music "pop" ____ or "classical" ____

Do you and your family attend musical concerts

often___ sometimes___ seldom___ never___

APPENDIX D

QUESTIONNAIRE

Check off the best response for each question on a scale of one to five. Number one indicates that you strongly disagree with the statement, number two, that you disagree; number three, you are not sure; number four, you agree; and number five, that you strongly agree.

	1	2	3	4	5
1. My teacher likes me as I am.	___	___	___	___	___
2. My teacher cares about my feelings.	___	___	___	___	___
3. Other students like me as I am.	___	___	___	___	___
4. Other students like to help me learn.	___	___	___	___	___
5. I like to work on my own.	___	___	___	___	___
6. I like teachers to keep students quiet.	___	___	___	___	___
7. I like teachers to set clear goals for me.	___	___	___	___	___
8. I like to talk to the whole class about my ideas.	___	___	___	___	___
9. I like studying music theory this way.	___	___	___	___	___

(The questions in part are taken from Johnson, 1976, p. 449)

APPENDIX E

TABLE 6

Pretest, Posttest, Retention and Test Categories
N, V and S means by Group

Test	N = 22 Lecture	N = 11 Text-Workbook	N = 16 Computer
Pretest	30.60	25.21	61.25
Posttest	*199.05	212.95	182.14
Retention test	*225.64	215.02	187.46
Pre N	3.93	3.26	9.51
Post N	*62.23	63.91	61.94
Retention N	*66.52	61.64	63.00
Pre V	.92	.92	1.87
Post V	*121.47	132.47	106.42
Retention V	*138.13	137.10	107.20
Pre S	.36	.09	.00
Post S	*16.42	16.69	13.79
Retention S	*18.07	17.54	17.29

* N = 21

APPENDIX F

TABLE 7

Percentage of Each Variable by Treatment Group

Variable	Lecture	Text-Workbook	Computer
Number of males	72.73 N= 22	90.91 N= 11	56.25 N= 16
	(72.73) (N= 22)	(68.18) (N= 22)	(52.38) (N= 21)
Private music lessons	10.00 N= 22	9.09 N= 11	43.75 N= 7
	(10.00) (N= 22)	(33.33) (N= 21)	(57.14) (N= 21)
Parents have music Background	54.55 N= 22	18.18 N= 11	56.25 N= 16
	(54.55) (N= 22)	(33.33) (N= 21)	(66.67) (N= 21)
Family attends concerts:			
a) often	00.00 N= 21	00.00 N= 10	6.25 N=16
	(00.00) (N= 21)	(10.00) (N= 20)	(4.76) (N=21)
b) some	4.76 N= 21	00.00 N= 10	37.50 N=16
	(4.76) (N= 21)	(5.00) (N= 21)	(38.10) (N= 21)

TABLE 7 – Continued

Variable	Lecture	Text-Workbook	Computer
c) seldom	66.67 N= 21	70.00 N= 10	37.50 N= 16
	(66.67) (N= 21)	(55.00) (N= 20)	(38.10) (N= 21)
d) never	28.57 N= 21	30.00 N= 10	18.75 N= 16
	(28.57) (N= 21)	(30.00) (N= 20)	(19.05) (N= 21)
Enjoyed elementary school music:			
a) yes	23.81 N= 21	18.18 N= 11	46.15 N= 13
	(23.81) (N= 21)	(33.33) (N= 21)	(41.18) (N =17)
b) some	14.29 N= 21	9.09 N= 11	23.08 N= 13
	(14.29) (N= 21)	(19.05) (N= 21)	(23.53) (N =17)
c) no	61.90 N= 21	72.73 N= 11	30.77 N= 13
	(61.90) (N= 21)	(47.62) (N= 21)	(35.29) (N= 17)

APPENDIX G

LECTURE NOTES, OVERHEAD TRANSPARENCY MATERIAL, AND STUDENT HANDOUTS FOR CLASSROOM INSTRUCTION OF ELEMENTARY RUDIMENTS OF MUSIC FOR BEGINNING BAND STUDENTS

Material

The theory concepts and sequence of presentation are taken from Practical Theory, Volume One, a combination textbook and workbook by Sandy Feldstein.

Unit Format

The concepts are divided into twenty eight lessons. Each lesson contains all the necessary materials for classroom presentation. The lecture notes indicate when to use the overhead transparency materials, as well as the student handouts.

How To Utilize This Material

As the emphasis of the band program is on the development of practical performance skills, the theory lessons are comparatively short. It is hoped that one theory lesson per period will be taught.

The lessons are sequential, although there is room for some variation in sequence.

The overhead transparency material and student handouts are found at the back of this unit. The student handouts are intended to test the student's knowledge of previous concepts as well as providing class notes.

ELEMENTARY RUDIMENTS OF MUSIC

Introduction

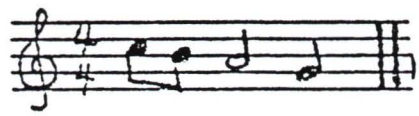
(Put on overhead #1)

"Welcome to the fun world of theory. Here's your opportunity to learn a new language! Soon you will be able to decipher the written music language. By the end of the theory unit, you should be able to do the following:"

(Read each objective on the overhead to the students. See if anyone can provide the answers. If some can, remind the students that they will all be able to do so within the next two months.)

Lesson One: The Staff

(Play the following for the class):



"I will repeat what you just heard four more times and I would like you to come up with some way to write it down."

(Have students explain how they completed the assignment and why they used the symbols they did. Point out that their symbols must do the following: a) indicate that the sounds get lower, b) indicate different sound lengths, and c) show exactly which musical sounds were played.)

"Musicians in most parts of the world now use the same symbols to write down musical sounds. Why would musicians try to use a standard set of symbols?"

Lesson One - Continued

(This is done so that, for example, a German speaking musician could write down a musical message that could be understood and performed by either a French or English speaking Canadian.)

(Put on top half of overhead #2)

"Music is usually written on a five line staff. Each line and space denote a musical sound. Think of the staff as like a ladder. As you go up, the sounds get higher."

(Hold your hand in front of your chest, with the back of your hand facing the class. Stretch your fingers out and you now have a staff with your thumb as the top line. With your other hand, point to the two different lines or spaces and check with the class to see which would be the highest sound.)

Lesson Two: The Treble Clef

Review: (Put on the top half of overhead #2 again and then replay the descending four note scale that was performed at the beginning of lesson #1. Discuss with the students where the musical sounds they just heard should be placed on the staff. They should be able to tell that the sounds descend.)

"Notes or musical sounds are named after the first seven letters of the alphabet."

(Put on bottom portion of overhead #2)

"At the beginning of each staff there is a symbol to indicate which musical sound or note is found on each line or in each space.

The symbol at the beginning of the staff is a treble clef or G clef. It is actually a very ornate letter G."

(Discuss the overhead.)

Lesson Three: Review

Review: (Use your hand to form the treble clef and have students name the line or space you point to. Have students choose a partner and take turns forming the staff with their hand and asking each other note names.)

Lesson Four: The Bass Clef

(Discuss overhead #3, top half.)

Lesson Five: Review

Review: (Same as lesson 3 except deal with the bass clef notes.)

Lesson Six: Review

(Have students complete handout #1)

Lesson Seven: Whole-Half-Quarter Notes

Review: (Use your hand to form the staff and have students identify notes on both bass and treble clefs)

"The length of a musical sound is indicated by different symbols called notes." (Put on overhead #3) "The whole note is used for a comparatively long sound. When the musical sound is half the length of a whole note, a half note is used. When the sound is half the duration of a half note, a quarter note is used.

The half and quarter notes have stems. If the notes are below the middle line of the staff, the stems go up and are attached to the right side of the note head. If

Lesson Seven - Continued

the notes are below the middle line of the staff, them stems go up and are attached to the right side of the note head. If the note is on or above the middle line, the stems go down and are attached to the left side of the note head."

Lesson Eight: Measures-Bar Lines-Double Bar Lines

Review: (Put several measures of various quarter and half notes on a staff on the black board. Have individual students put on the stems)

"Music is divided into equal parts called measures by bar lines. The end of a section of music is marked by a double bar line."

Lesson Nine: Time Signatures and Note Values

Review: (Draw a staff on the black board. Have a student put in bar lines to form four measures, and end with a double bar line.)

(Put on bottom half of Overhead #4)

"Times signatures are two numbers found at the beginning of a piece of music. The top number indicates the number of beats or counts in each measure. The bottom number shows what kind of note gets one beat. $\frac{4}{4}$ means four beats in each measure and a quarter note receives one beat or count."

Lesson Ten: Review

(Have students complete Handout #2)

Lesson Eleven: The Grand Staff

Review: (Write a rhythm in $\frac{4}{4}$ consisting of quarter notes, half notes and whole notes on the board. Choose a pitch and have students sing "La" to the rhythm to indicate their understanding of note values.)

(Put on top half of Overhead #5)

"The treble clef and bass clef can be joined together by a brace which consists of a straight line and a curved line. To extend either staff, short lines called leger lines are used. Between the treble and bass staves there is room for one leger line for the note, middle C."

Lesson Twelve: Leger Lines

Review: (With two staves already on the black board, have a student make a grand staff by adding the brace. Have another student add the leger line for middle C and have a student name each line and space on the grand staff with the help of the class.

(Put on bottom half of Overhead #5)

"Leger lines extend the staff."

Lesson Thirteen: Review

Review: (Have students complete Handout #3)

Lesson Fourteen: Whole-Half-Quarter Rests

"It is just as important to have symbols to indicate the length of silence as it is to have symbols to indicate the length of a musical sound."

(Put on Overhead #6, top half)

"Just as there is a symbol for a whole note, half note and a quarter note there are symbols for whole rests, half rest and quarter rest."

Lesson Fifteen: Another Time Signature

Review: (Have several measures of rhythms in $\frac{4}{4}$ time on the board using whole notes and rests, half notes and rests and quarter notes and rests. Have students sing an assigned pitch for each note length and stop singing for each rest duration. Students may find it easier to do if the teacher points out each beat for them below the notation.)

(Put on bottom half of Overhead #6)

"Every time signature is set up the same way. The top number tells you how many counts there are in each measure. The bottom number indicates the type of note that gets one count."

Lesson Sixteen: Another Time Signature

Review: (Have the $\frac{4}{4}$ and $\frac{2}{4}$ time signatures on the board and have individual students explain what each number indicates.)

(Put on top portion of Overhead #7)

"Review the information a time signature provides with the example of this new time signature."

(Have students complete Handout #4)

Lesson Seventeen: The Dotted Half Note

Reveiw: (Have a rhythm of time on the board incorporating half and quarter notes and rests. Have a student explain the time signature and another student add the bar lines.)

(Put on bottom half of Overhead #7)

"A dot placed after a note adds one half the value of the original note. In $\frac{4}{4}$, $\frac{3}{4}$, or $\frac{2}{4}$ time a half note receives two counts. A dot increases the note's value by half so a dot added to a half note increases the note's value to three.

Lesson Eighteen: Ties and Slurs

Review: (Have students write a rhythm in $\frac{4}{4}$ time, four measures long. They can use whole, half and quarter notes and rests as well as the dotted half note. The teacher will take them in and make an overhead of the rhythms with the composer's name beside it and use it for sight reading practise in upcoming classes.)

"A tie is a curved line that connects two adjacent notes of the same pitch. The musical sound is to be produced for the duration of both note values."

(Put on Overhead #8, top half)

Lesson Eighteen - Continued

"The slur is also a curved line but it connects adjacent notes of different pitch. The slur indicates to play the connected notes as smoothly as possible."

Lesson Nineteen: Repeat Signs

Review: (Have an example of a tie and a slur on the black board and have students differentiate their meaning)

(Put on bottom half of Overhead #8)

"A double bar line with two dots before it, indicate for the performer to go back to the beginning of the piece and play again. Sometimes you repeat back to another repeat sign."

Lesson Twenty: First and Second Endings

Review: (Review the repeat sign's purpose with the class)

(Put on bottom half of Overhead #8)

"When the performer reaches the repeat sign in the first ending, the performer goes back to the beginning and repeats the music. When the first ending is again reached, it is skipped and the second ending is played."

(Have students complete Handout #5)

Lesson Twenty-One: Eighth Notes

Review: (Use your hand to form a staff and quiz students on note names on both the treble and bass clefs.)

(Put on Overhead #9)

"An eighth note looks like a quarter note with a flag added to its stem.

Two eighth notes equal one quarter note.

When two or more eighth notes are adjacent, they are joined together with a beam."

Lesson Twenty-Two: Eighth Rest

Review: (Ask students how many eighth notes are equal to one quarter note? One half note? One whole note?)

(Put on Overhead #9)

Lesson Twenty-Three: Dotted Quarter Notes

Review: (Put up several of the student-composed rhythms from lesson thirteen on the overhead and have the class clap them.)

"Since a dot increases a note's value by one half, a dot added to a quarter note which receives one count will now receive one and a half counts."

(Put on bottom of Overhead #9)

Lesson Twenty-Four: Review

Review: (Have students complete Handout #6)

Lesson Twenty-Five. Flat

(Put on Overhead #10 to discuss flats)

Lesson Twenty-Six: Sharps

Review: (Put on Overhead #10 again and have students name the flat names for the black keys on the keyboard.)

(Put on top half of Overhead #11 to discuss sharps.)

Lesson Twenty-Seven: Natural

Review: (Put on Overhead #11 again and have students name the sharp names for the black keys on the keyboard.)

(Put on bottom half of Overhead #11 to discuss the natural symbol.)

Lesson Twenty-Eight: Review

(Have students complete Handout #7)

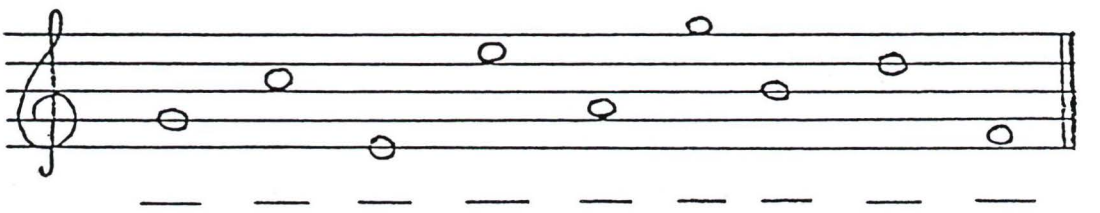
HANDOUT #1 Name_____

1. Music is written on a _____which has five lines and _____spaces.

2. One the lines and spaces below, place two notes and put an "X" through the one which would have the highest sound.

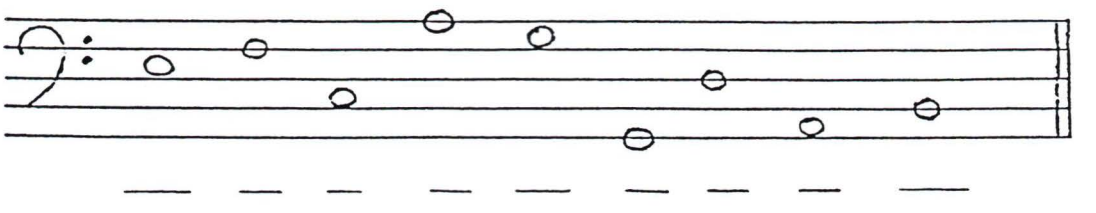
3. The treble clef or_____clef establishes the note_____ on the _____line.

4. Name the notes.



5. The_____clef or _____clef establishes the note "F" on the _____line.

6. Name the notes.



HANDOUT #2 Name_____

1. Draw a whole note _____

2. Name this note.  _____

3. Draw a quarter note._____

4. A half note equals_____quarter notes.

5. _____quarter notes equal one whole note.

6. A whole note equals_____half notes.

7. Music is divided into equal parts called_____by _____.

8. The end of a piece of music is marked with a_____ _____.

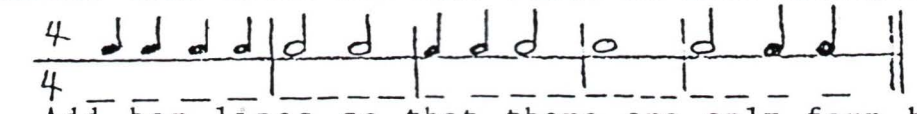
9. Time signatures are found_____.

10. The top number of a time signature indicates the number of beats or_____in each_____.

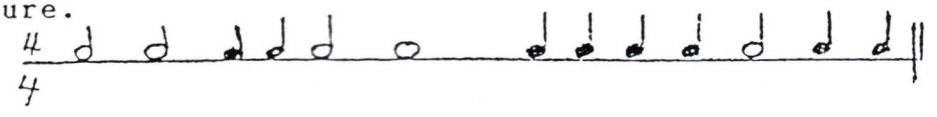
11. The bottom number of a time signature shows what kind of_____receives one beat.

12. In $\frac{4}{4}$ time, a quarter note receives_____beat(s), a half note receives____beat(s) and a whole note receives ____beat(s).

13. Write out the beats or counts under each measure. Remember that there are four beats in each measure.

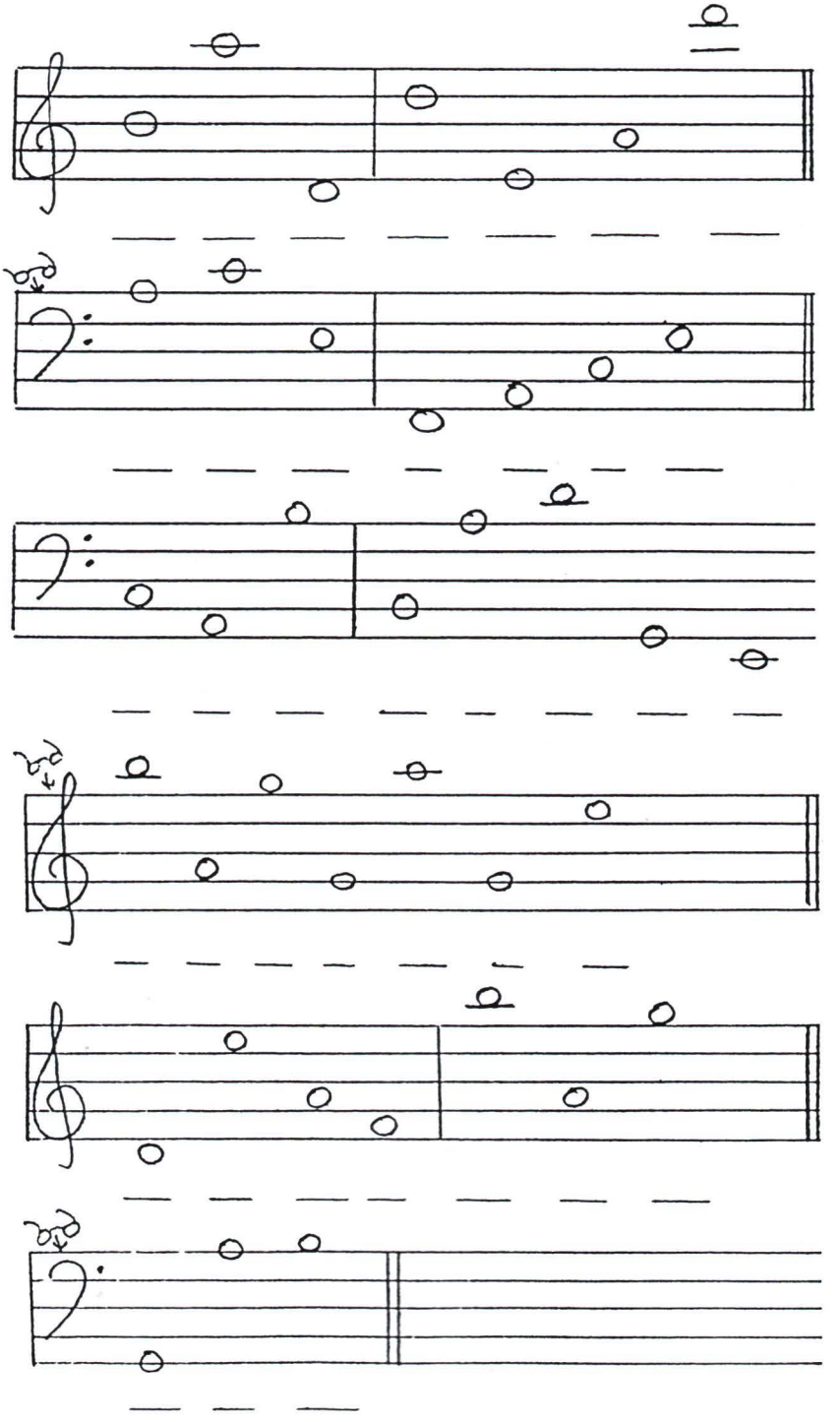


14. Add bar lines so that there are only four beats in each measure.



HANDOUT #3 Name_____

Name the notes within each measure. Each measure spells a word.



HANDOUT #4

1. The G clef and the F clef can be joined together by a _____which consists of a curved line and a_____line to form a _____.

2. To extend a staff, _____are used. The short line between the two joined staves is for the note called _____.

3. One whole note ( ) =_____half notes ( )

   One half note ( ) =_____quarter notes ( )

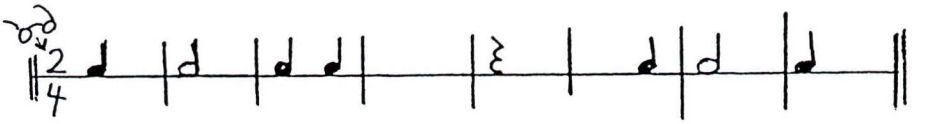
   One whole note ( ) =_____quarter notes ( )

4. One whole rest ( ) =_____half rests ( )

   One half rest ( ) =_____half rests ( )

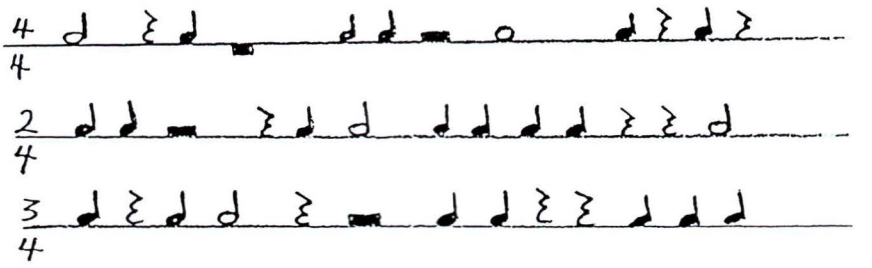
   One whole rest ( ) =_____quarter rests ( )

5. Complete each measure by adding one note when needed.



6. Complete each measure by adding one rest when needed.

7. Add bar lines.



HANDOUT #5 Name_____

1. A dot increases a note value by_____.

2. A 𝅗𝅥. receives_____counts in $\frac{4}{4}$, $\frac{3}{4}$ or $\frac{2}{4}$ time.

3. Add the number of counts and write the sums.

a) 𝅗𝅥 𝅗𝅥 𝄾 =

b) 𝅝 𝄻 =

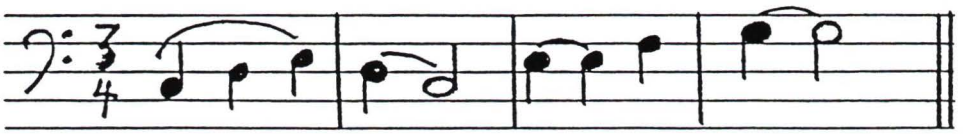
c) 𝅗𝅥. 𝅗𝅥 𝄾 =

d) 𝄻 𝅗𝅥 =

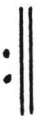
4. A Tie is a curved line that connects two adjacent notes of the same_____.

5. A Slur is a curved line that connects two ormore adjcent notes of_____pitch.

6. Indicate whether each of the following is a slur or a tie.

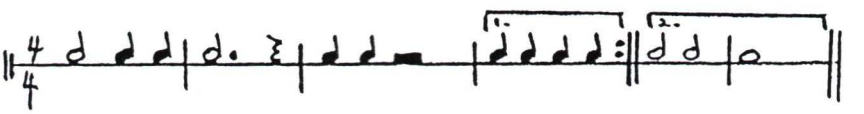


_____ _____ _____ _____

7. This symbol  means_____

_____

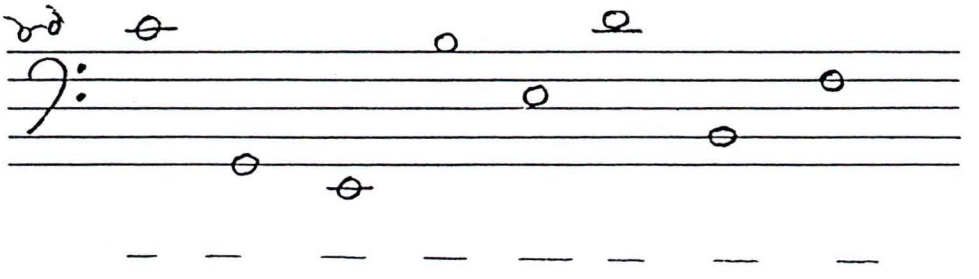
8. Use arrows to show how you would perform this piece.



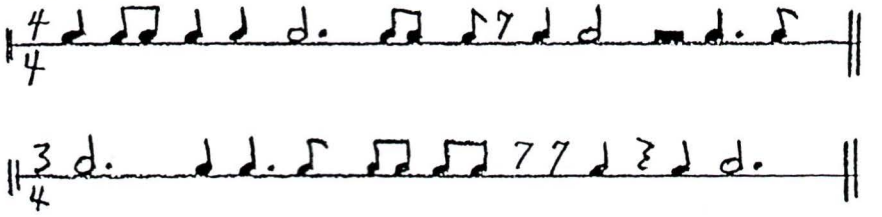
HANDOUT #6 Name_____

1. Two eighth notes equal_____quarter note(s).
2. One half note is equal to _____eighth notes.
3. Draw an eighth note_____. Draw two eighth notes joined together by a beam._____
4. Draw an eighth rest._____
5. One eighth rest equals_____eighth note(s).
6. A dot increases a note's value by_____.
7. A dotted quarter note receives_____count(s).
8. Add the number of counts and write the sums.

9. Name the notes.



10. Add bar lines.

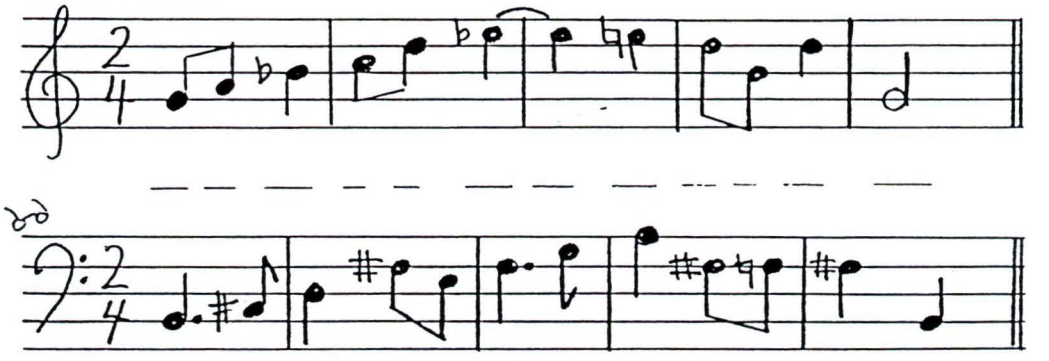


HANDOUT #7 Name_____

1. A flat sign (♭)_____the pitch of a note a half step
2. Draw a flat sign in front of each note. The curved part of the sign must be found directly in front of the note.
3. A sharp sign(♯)_____the pitch of a note a half step
4. Draw a sharp sign in front of each note. The middle of the sharp sign must be found directly in front of the note.
5. A natural sign(♮)_____the effect of a flat or sharp.
6. Draw a natural sign in front of each note. The middle of the natural sign must be found directly in front of the note.
7. Sharps, flats and naturals are called_____.
8. An accidental in front of a note affects every note on the same line or space for an entire_____.
9. The bar line_____an accidental.
10. When a note with an accidental is tied across the bar line, its accidental is_____.

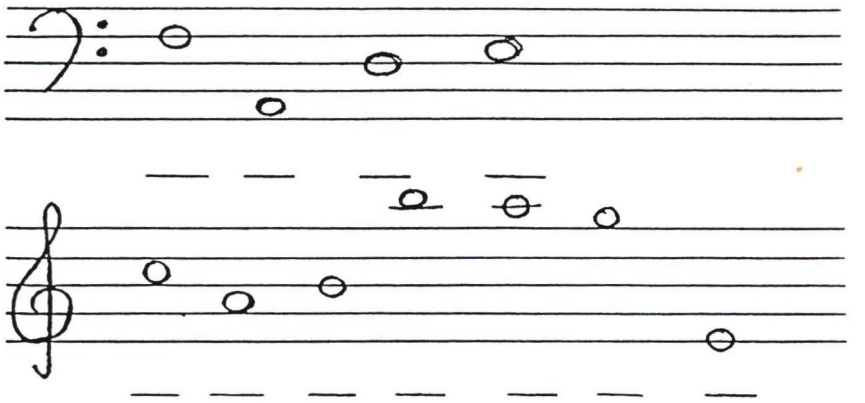
Handout #7 - Continued

11. Name the notes. If a note has an accidental in front of it, the accidental is included in the note name. (ie. A G note with a sharp sign in front of it is no longer called G but G#).

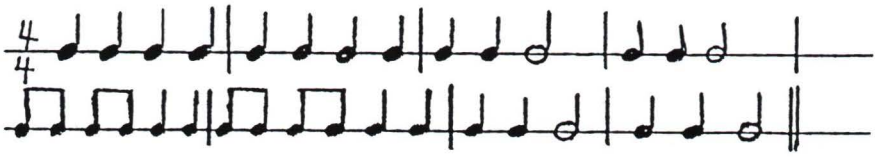


Overhead #1

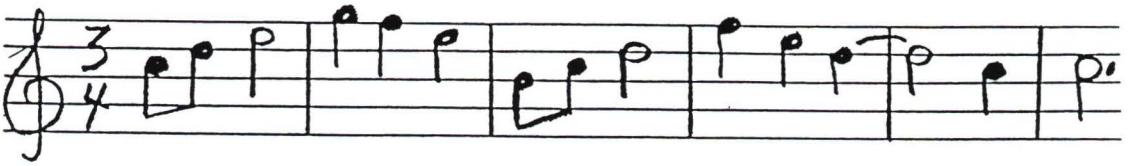
1) Recognize the words spelled out by these notes.



2) Clap the rhythm from a familiar tune like the following example. Can you name the tune?



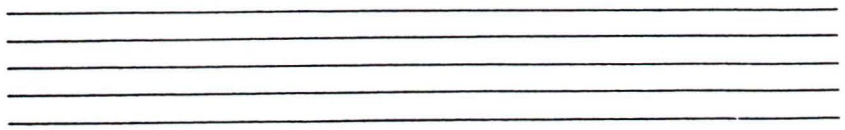
3) Understand musical symbols so that you can play the "music message" correctly.



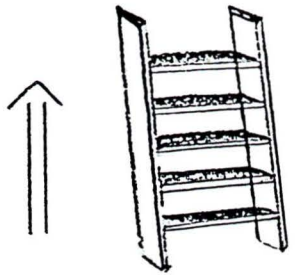
4) Use you knowledge of musical symbols to write your own "music message".

Overhead #2

Staff Music is written on five lines and four spaces.



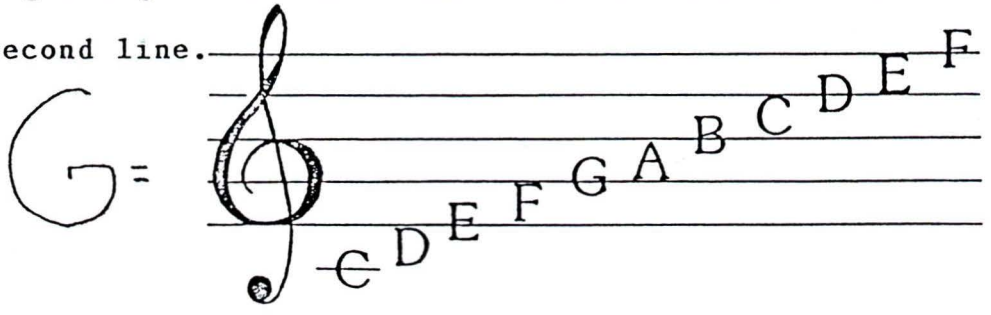
Think of the staff as a ladder. As the lines and spaces get higher, so do the sounds they represent.



Notes or musical sounds are named after the first seven letters of the alphabet.

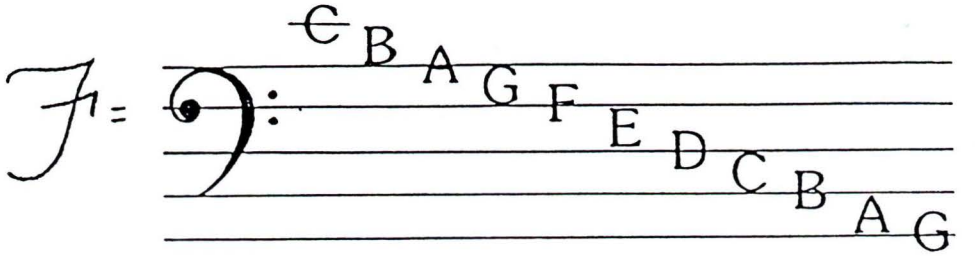
A B C D E F G

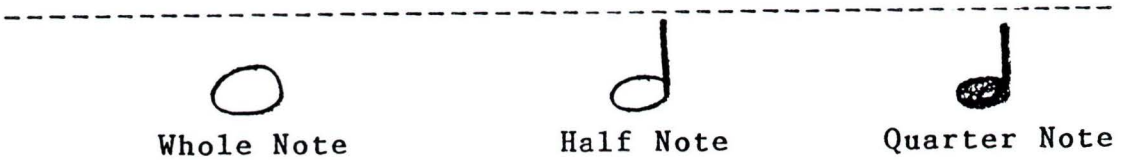
The treble clef or G clef is an ornate letter G found at the beginning of a staff which establishes the note G on the second line.



Overhead #3

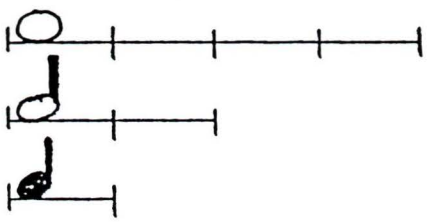
The bass clef or F clef is an ornate letter F found at the beginning of a staff which establishes the note F on the fourth line.



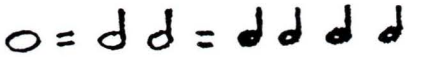


Whole Note Half Note Quarter Note

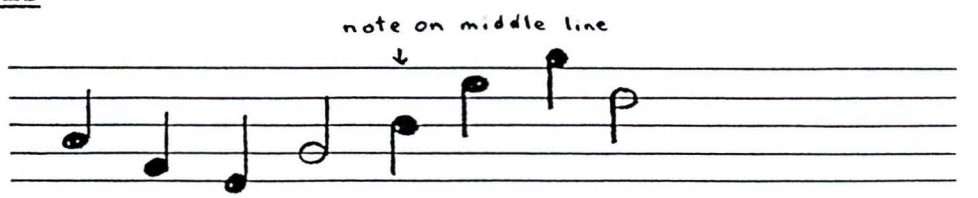
Duration of Sound



Comparative Note Values



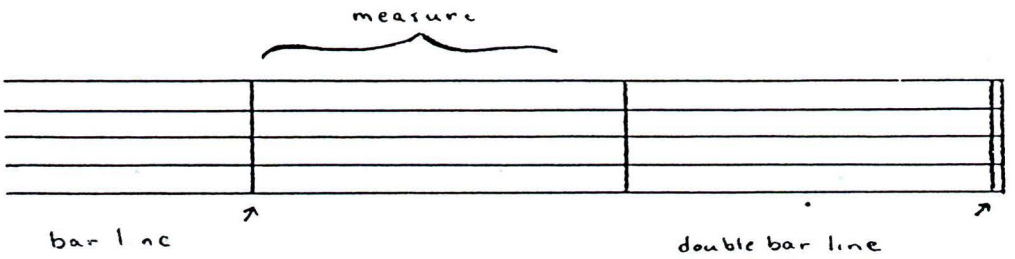
Stems



Overhead #4

Music is divided into equal sections called measures by bar lines.

The end of a piece of music is marked with a double bar line.



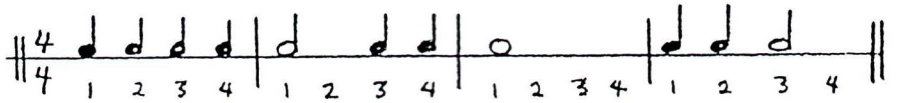
Time Signatures

4 = beats or counts in each measure

4 = type of note that receives one beat or count

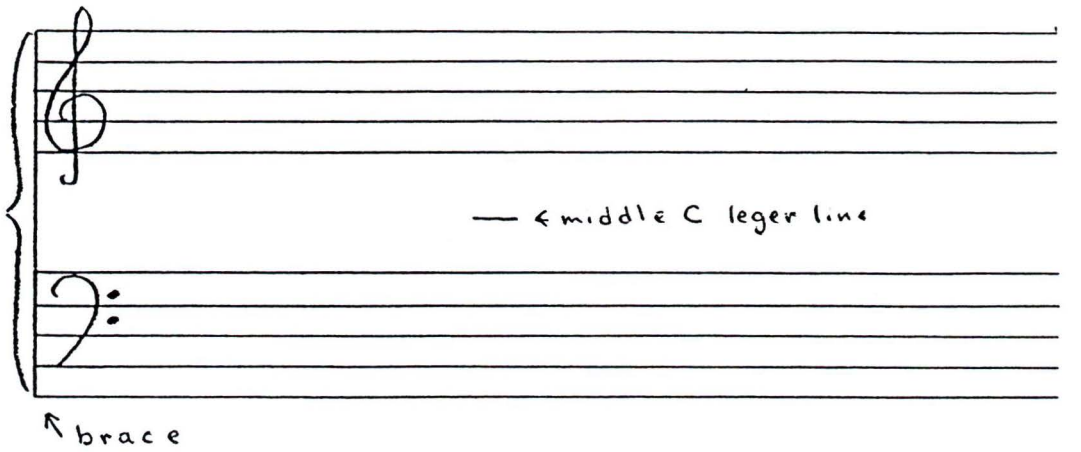
If a quarter note ♩, receives one beat and a half note 𝅗𝅥, is equal to two quarter notes, then the half note receives two beats or counts. The whole note 𝅝, equals four quarter notes so it receives four beats.

In the following example, there are four beats in each measure and the quarter note receives one beat.

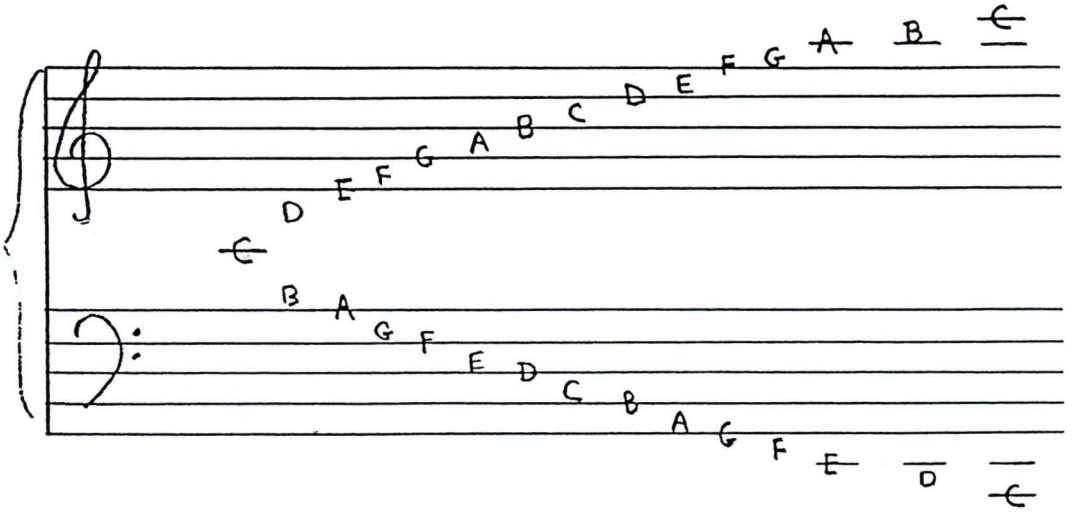


Overhead #5

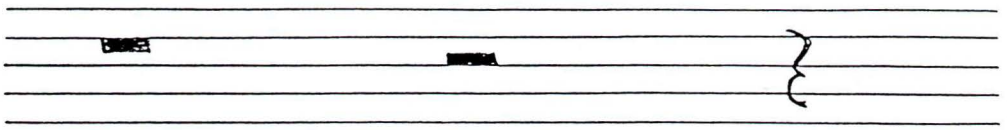
The Grand Staff



Leger Lines



Overhead #6



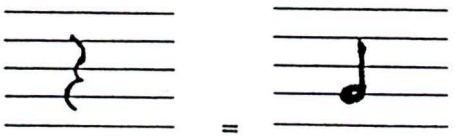
whole rest half rest quarter rest

The duration of a  =

whole rest whole note

The duration of a  =

half rest half note

The duration of a  =

quarter rest quarter note

Time Signatures

2 = There are two beats or counts in each measure.

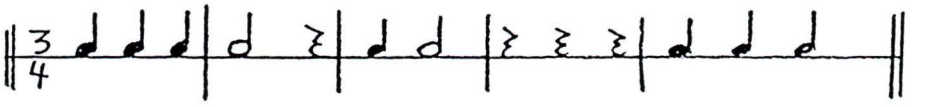
4 = Every quarter note receives one beat or count.

Overhead #7

Time Signature

3 = There are three beats or counts in each measure.

4 = Every quarter note receives one beat or count.

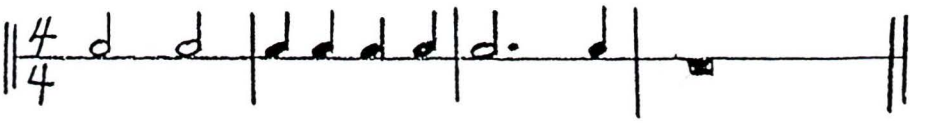


The Dotted Half Note

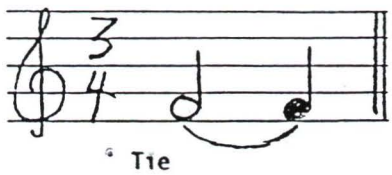
 = two counts

A dot increases a note's value by one half.

 = three counts



Overhead #8



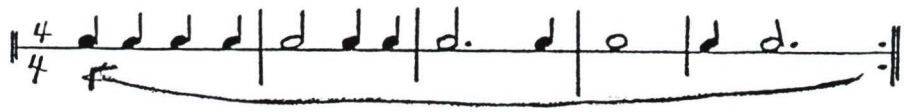
Tie

A curved line connecting two adjacent notes of the same pitch. The pitch is held for the duration of both note values.

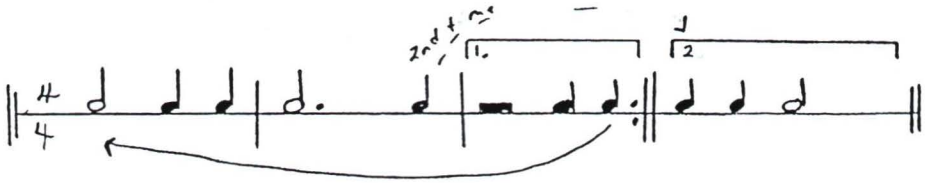
Slur

A curved line connecting two or more adjacent notes of different pitch. Play the connected notes as smoothly as possible.

Repeat Sign: Go back to the beginning or another repeat sign and play again.



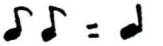
First and Second Endings

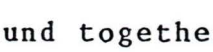


Overhead #9

Two eighth notes equal one quarter note.

eighth note



When two or more eighth notes are found together, they may be joined together with a beam. 

A half note equals four eighth notes 

A whole note equals eight eighth notes

eighth rest

One eighth rest equals one eighth note 

Two eighth rests equal one quarter rest 

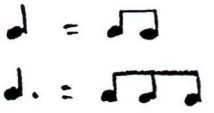
Four eighth rests equal one half rest

Eight eighth rests equal one whole rest

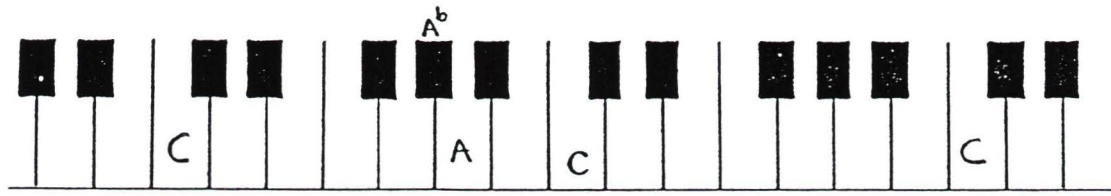
dotted quarter note

A dot increases a note's value by one half.

In , ,and , a note receives one count. The dot adds 1/2 a count. A dotted quarter note receives one count.

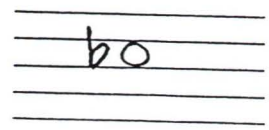


Overhead #10

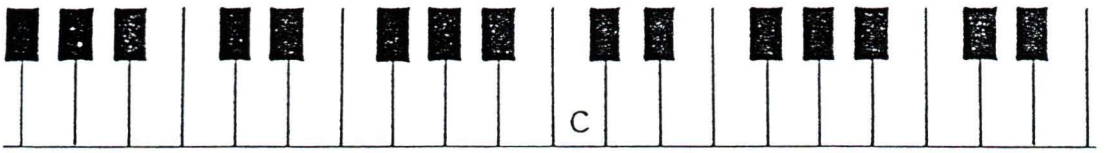


Note how the first seven letters of the alphabet name all the white keys. The black keys are arranged in groups of three or two. The C key is the first white key to the left of the two black keys. Sometimes we want a musical sound that is between that produced by two white keys. The black keys fulfill this function.

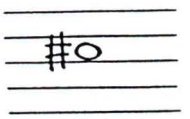
A flat sign (♭) lowers the pitch of a note a half step. A musical sound a step lower than A is A flat. In music, we would indicate A flat by placing the flat sign in front of the note.



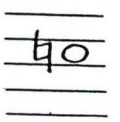
Overhead #11

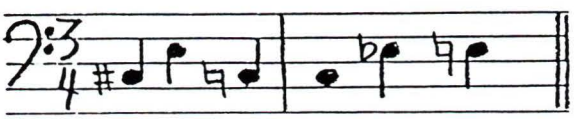


Sometimes we want a musical sound that is between that produced by two white keys. The black keys fulfill this function.

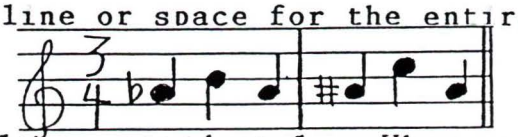
A sharp sign (#) raises a pitch of a note a half step. A musical sound a half step higher than A is A sharp. In music, we would indicate a sharp by placing the sharp sign in front of the note. 

Note that black keys each have a flat name and a sharp name. What would be the flat name for F#?

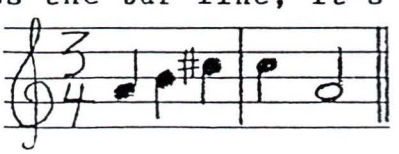
A natural sign (♮) cancels the affect of a flat or sharp. It is placed directly in front of the note it affects. 

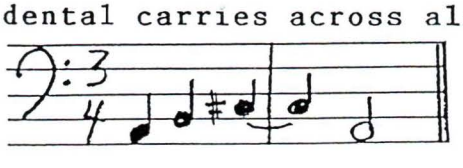


Sharps, flats and naturals are called accidentals. When they are placed in front of a note, they affect every note on the same line or space for the entire measure.



A bar line cancels an accidental. When a note is tied across the bar line, it's accidental carries across also.





VITA

Surname: JOHNSTON MACMILLAN Given Names: BARBARA ELAINE

Place of Birth: Stettler, Alberta

Date of Birth: March 30, 1957

Educational Institutions Attended, with Dates of Entering and Leaving:

Camrose Lutheran College, Camrose, Alberta 1975 to 1977

University of Alberta, Edmonton, Alberta 1977 to 1979

University of Victoria, British Columbia 1982 to 1987

Degrees, Diplomas, Etc., Awarded, with Dates and Names of Institutions:

Bachelor of Education 1979,

University of Alberta, Edmonton

Honors and Awards:

Publications:

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Title of Thesis

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Author [redacted]

BARBARA ELAINE JOHNSTON MACMILLAN

February 14, 1987