**Physics 200** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Notes: String Instrument Scales

You will be expected to play a song. This will probably be easier if you have some way of remembering which notes are part of a minor key or major key (because your song will be in one type of key or the other).

1. On a piano keyboard, the keys get higher in pitch as you travel to the \_\_\_\_\_\_\_\_\_\_\_\_\_ (left or right?).

2. Each key on a piano keyboard, whether it is black or white, is separated from the next key by exactly one

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ step.

3. On a piano keyboard, the white keys are the notes (A, B, C, D,E, F, and G) and the black keys are called sharps (#) or flats(♭). The black key adjacent and to the right of an A is an A \_\_\_\_\_\_\_\_\_\_. The black key adjacent and to the left of an A is an A\_\_\_\_\_\_\_\_\_\_\_\_.

4. Label 13 consecutive piano keys with their note names. For the darkened keys, give either the sharp name or the flat name.

A row of piano keys

Description automatically generated with medium confidence

5. If you play all of these notes, from low to high, you are playing what is called a

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. The only major key scale that can be played without using any black keys is the \_\_\_\_\_\_\_ Major scale.

12. All major key scales have the following pattern of whole and half steps: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. Show the keys of a 1-octave **C major** scale. Number the notes 1-7.



14. Show the keys of a 1-octave (8 note) **A major** scale. Number the notes 1-7.



15. The only **minor** key scale that can be played without using any black keys is the \_\_\_\_\_\_\_ Major scale.

16. All **minor** key scales have the following pattern of whole and half steps: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. Show the keys of a 1-octave (8 note) **A minor** scale. Number the notes 1-7.

A row of piano keys

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18. Show the keys of a 1-octave **C minor** scale. Number the notes 1-7.

A row of piano keys

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**Playing major keys on String Instruments:**

17. String instruments don’t have white and black keys, but many do have frets. Each space between frets is a half-step. Unlike a piano, the precise frequency at any fret varies according to the string mass, string tension, etc. So, your instrument can have an open string frequency corresponding to an A, A#, D♭, or whatever. Thus we will be marking notes in a more flexible way. The notes of the scale will be 1-7, and an 8 octave scale will go from 1 up to the next 1. On the half of the instrument above the string, write the notes of a major scale, starting with 1 at the nut. Then write the minor scale notes below the string.

Chart

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18. The first note of a scale is called the “tonic.” There’s no reason why the tonic has to be your open string note. On the diagram below, place your number 1 in a different location and then write the rest of your notes.

Chart

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