

Activity Sheet 3

In music class, Miss Pam has students playing their own compositions. Sami wrote a piece using two identical xylophones. He used some software he got off the Internet to make this written score:



Sami plays the part that starts with the low notes and goes up one note at a time through two octaves. Rachel plays the part that starts with the high notes and goes down one note at a time through the same two octaves and in the same meter. As you listen to the music, consider the following questions.

1. Will Sami and Rachel play the same note at the same time?



- a.* Listen to the composition. Do Sami and Rachel play the same note at the same time? How do you know?
- b.* How is this musical score like the graphs of intersecting lines in algebra?
- c.* What information is represented on the x -axis? What information is represented on the y -axis?
- d.* Where in the music is the intersection? Where on the score is the intersection?
- e.* How is that note an intersection point?
- f.* Write equations for the musical lines in this problem.

2. How can Sami modify the piece so that the two parts still go up (or down) one note at a time but are never on the same note at the same time?

A sample composition Bonnie might have written:



- g.* How is the musical score (the written music) like a graph of parallel lines?
- h.* What would the notes correspond to in the graphs of the lines?
3. How would the sound change if the second part played only one note over and over?

Here is a sample score:



- i.* Does this piece of music sound like parallel or intersecting lines? Explain.
- j.* How is the note a “solution” to the “simultaneous equations” re-presented by this music?