



Name: _____ Date: _____

Math in Music: Try other music challenges
Student Handout

The Hip Hop group DobleFlo is trying to mix an electronic drum track with an instrumental sample, but the tempos don't match.

Your challenge is to help DobleFlo mix the tracks by calculating the tempo (speed) of the instrumental sample in BPM (beats per minute).

Go online to www.getthemath.org, click on "The Challenges," then scroll down and click on "Math in Music: Try other music challenges." Select "Next" to begin.

1. **Choose your music.** Play the samples and drum tracks and select one of each:

Instrumental sample # _____ Electronic drum track # _____

2. **Identify what you already know.** Select "Next" to continue. Count the number of beats in the sample and write down the length of the sample (in seconds) as indicated above the sample on the screen:

- The number of beats in the instrumental sample is _____.
- The length of the instrumental sample is _____ seconds.

3. **Plan it out.** What is the problem you want to solve? How will you do it?

4. **Solve your problem** in the space below. Show all your steps and be sure to label, for example: seconds, beats.

Solution: The tempo of the instrumental sample in BPM is: _____
(Round your answer to the nearest whole beat.)

5. Listen to the sound of your mixed track.

- Do the tempos of the sample and the drum track match up? Explain why your plan did or didn't work.

6. How did you figure out your final solution? If you were going to email DobleFlo to explain your strategy, what would you tell them?

7. If you had the find the tempo of a new instrumental sample, with a different number of beats (let's say, b beats) and a different length (t seconds), explain what steps you would take.