

Buying mp3s

Lesson Plan



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The Task

You have decided to use your allowance to buy an mp3 purchase plan. Your friend Alex is a member of i-sound and pays \$1 for each download. Another one of your friends, Taylor, belongs to Rhaps and pays \$13 a month for an unlimited number of downloads. A third friend, Chris, belongs to e-musical and pays a \$4 monthly membership fee and \$0.40 a month per download. Each friend is trying to convince you to join their membership plan. Under what circumstances would you choose each of these plans and why?

Materials

- The task (i.e., copies of the student packet—black line masters 1 and 2)
- Rulers
- Scratch (graph) paper
- Color pencils
- Calculators
- Document camera for groups to present findings or, alternatively, one large presentation paper per group

Facilitating Task

- Class will be divided into groups of 3-4 students.
- Read the task together and answer clarifying questions.
- Groups will be given materials upon request.
- Give students individual think time and then work together in groups.
- Groups present findings during last 10-15 minutes of class.

Misconceptions

- Incorrect formulas (e.g., $c=4d+.5d$ versus $c=4+.5d$)
- Independent versus dependent variable confusion
- Graphing outside of Quadrant I
- Graphing lines incorrectly

Suggested Prompts or Questions

- Do you pay the monthly fee with each download?
- Which quantity depends on the other, number of downloads or cost?
- Can you download a negative number of songs?
- What kind of line would c (or y) = 13 be?
- As an extension: A discussion of discrete versus continuous functions