

7.RP Music Companies, Variation 1

Alignments to Content Standards: 7.RP.A.2

Task

BeatStreet, TunesTown, and MusicMind are music companies. BeatStreet offers to buy 1.5 million shares of TunesTown for \$561 million. At the same time, MusicMind offers to buy 1.5 million shares of TunesTown at \$373 per share. Who would get the better deal, BeatStreet or MusicMind? What is the total price difference?

IM Commentary

This problem requires a comparison of rates where one is given in terms of unit rates, and the other is not. See "7.RP Music Companies, Variation 2" for a task with a very similar setup but is much more involved and so illustrates 7.RP.3.

Teachers should be aware that the context of stock purchase may not be familiar to 7th graders. The context should be explained to students if needed.

Solutions

[Edit this solution](#)

Solution: Compute the unit rate

One simple way to attack the problem is to compute the unit rate for the BeatStreet offering.

The unit rate that BeatStreet is offering, i.e. the price per share, is

$$\frac{561,000,000 \text{ dollars}}{1,500,000 \text{ shares}} = 374 \frac{\text{dollars}}{\text{share}}$$

The BeatStreet offer unit rate is thus 374 dollars per share. MusicMind is offering to buy shares at the unit rate of 373 dollars per share and so has the better deal. MusicMind gets the shares at \$1 per share less than BeatStreet. The total difference is

$$1.5 \text{ million shares} \times \frac{1 \text{ dollar}}{\text{share}} = 1.5 \text{ million dollars}$$

In summary, MusicMind gets the better deal and would save \$1.5 million over what BeatStreet would pay.

[Edit this solution](#)

Solution: Compute total cost

Since we have to figure out the difference in cost anyway, an alternative way to solve this problem is to just compute how much MusicMind would have to pay altogether.

$$1,500,000 \text{ shares} \times 373 \frac{\text{dollars}}{\text{share}} = 559,500,000 \text{ dollars.}$$

This is less than BeatStreet offered, so MusicMind gets the better deal. Using this approach not only answers the first question, but the answer to the second is now a simple subtraction problem:

$$561,000,000 \text{ dollars} - 559,500,000 \text{ dollars} = 1,500,000 \text{ dollars.}$$



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