

Rates, Ratios and Proportions

Tell whether the ratios form a proportion.

1. $\frac{2}{5}, \frac{8}{20}$

2. $\frac{3}{7}, \frac{6}{13}$

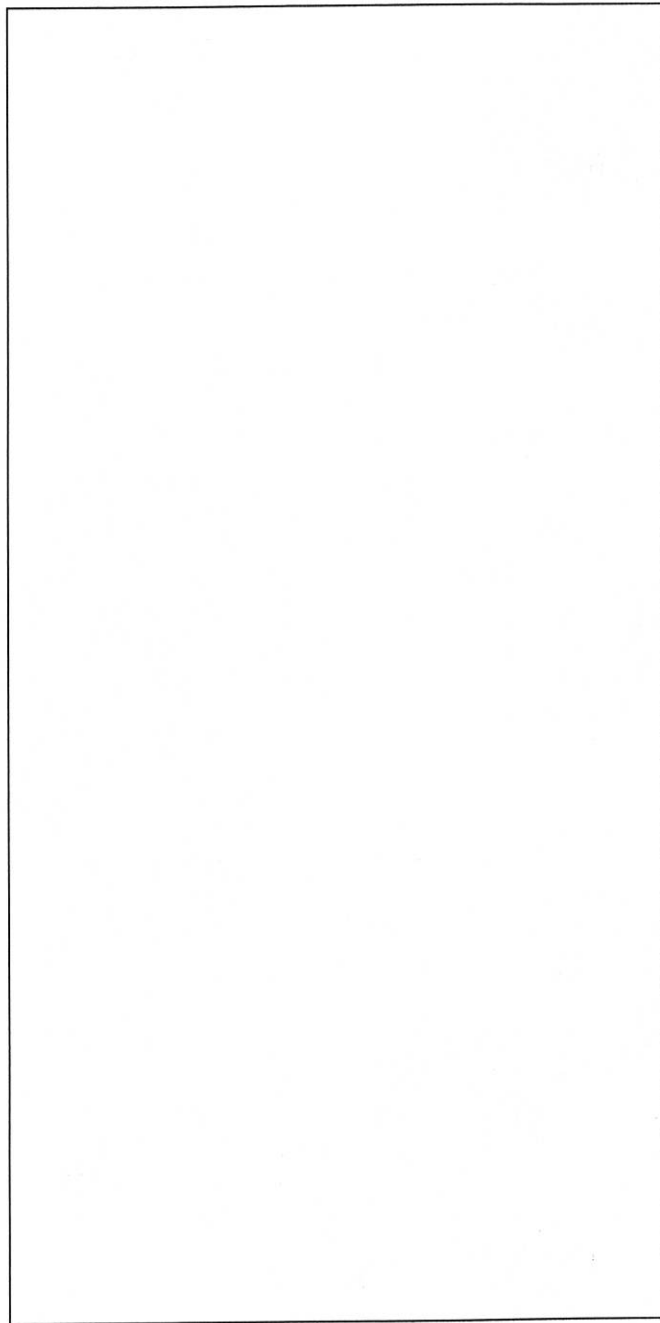
3. $\frac{5}{6}, \frac{15}{18}$

4. $\frac{18}{24}, \frac{12}{16}$

Tell whether the two rates form a proportion.

5. 55 miles in 1 hour; 450 miles in 8 hours
6. \$3.00 for 32 ounces of strawberries; \$1.75 for 24 ounces of strawberries
7. 45 baskets in 85 shots; 54 baskets in 102 shots
8. 18 push-ups in 60 seconds; 27 push-ups in 90 seconds
9. One type of cereal has 2 grams of protein per 1-cup serving. Another cereal has 1 gram of protein per half-cup serving. Do these rates form a proportion?
10. A 50-fluid ounce bottle of laundry detergent washes 32 loads of laundry. A 100-fluid ounce bottle washes 60 loads of laundry. Are they proportional? Do these rates form a proportion?

Work Area



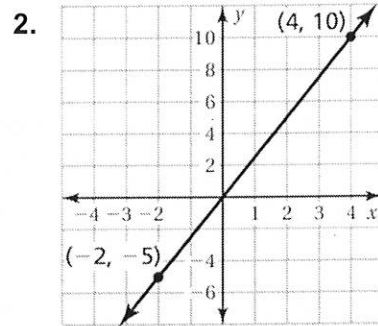
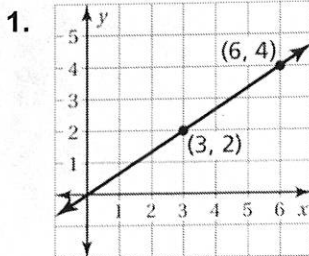
Use the Cross Products Property to solve the proportion.

11. $\frac{14}{21} = \frac{b}{9}$

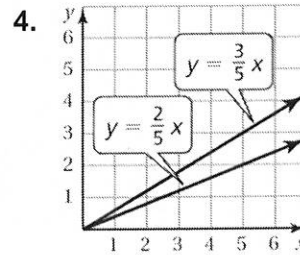
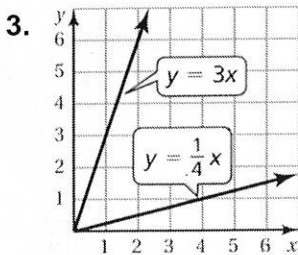
12. $\frac{10}{p} = \frac{6}{9}$

13. $\frac{55}{4} = \frac{h}{6}$

Find the slope of the line.



Which line has the greater slope? Explain your reasoning.



5. You and a friend throw tennis balls up in the air at the same time. The table shows the height (in feet) of each ball.

Seconds, x	2	4	5
You, y	12	24	30
Friend, y	11	22	27.5

- Graph the data on the same coordinate axes. Draw lines through the points. Label each graph.
- Find the slope of the line for each tennis ball. What does each slope mean in the context of the problem?
- Which ball is moving faster? How is this indicated in the slope?
- Find the height of each ball 3.5 seconds after being thrown.

