

Proportions Review

Write the ratio as a fraction in simplest form.

- 1) 15 girls to 6 boys

$$\frac{5 \text{ girls}}{2 \text{ boys}}$$

- 2) 24 players : 3 teams

$$\frac{8 \text{ players}}{1 \text{ team}}$$

Find the unit rate.

- 3) 405 rotations in 5 minutes

$$\frac{81 \text{ rotations}}{1 \text{ minute}}$$

- 4) 72 ounces for 12 servings

$$\frac{6 \text{ oz}}{1 \text{ serving}}$$

Are the ratios proportional?

- 5) $\frac{8}{24} = \frac{3}{15}$ *Yes.*

- 6) $\frac{3}{7} = \frac{12}{21}$ *No.*

- 7) The table shows the rates for sending text messages. Are the rates proportional? Explain.

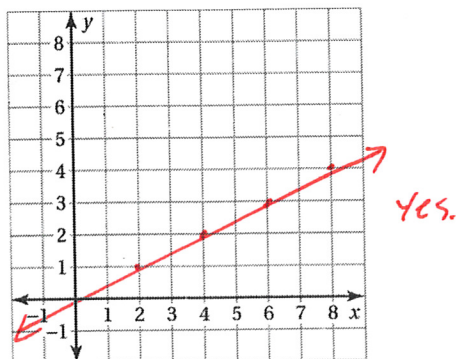
Messages	Cost
50	\$6
75	\$9
100	\$12

Yes. The messages + costs go up consistently through out the table. Plus, each text message costs \$0.12.

Use a graph to tell whether x and y are in a proportional relationship.

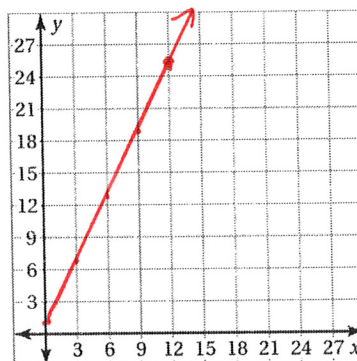
8)

x	2	4	6	8
y	1	2	3	4



9)

x	3	6	9	12
y	7	13	19	25



Solve the proportion. Show all work.

10) $\frac{2}{3} = \frac{n}{12}$

$n = 8$

11) $\frac{33}{p} = \frac{3}{28}$

$p = 308$

12) $\frac{k}{6} = \frac{15}{18}$

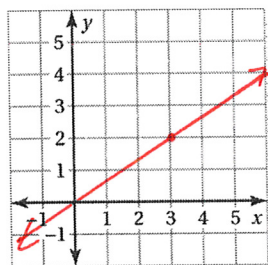
$k = 5$

13) $\frac{2}{3} = \frac{3}{q}$

$q = 4.5$

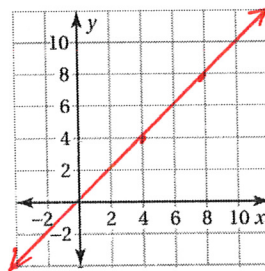
Graph the line that passes through the two points. Then find the slope of the line.

14) $(0, 0), (3, 2)$



$m = \frac{2}{3}$

15) $(4, 4), (8, 8)$



$m = 1$

- 16) Your baseball team has won 6 games and lost 4 games. If the team does not lose any more games, how many games must the team win to have a win : loss ratio of 2 : 1? Explain your answer.

2 games

$6 + 2 = 8$

→ 8 games won : 4 games lost

$= 2 : 1$

- 17) It costs \$145 for 10 people to attend a concert. How much does it cost a group of 8 people?

$$\frac{\$145}{10} = \frac{x}{8}$$

$$x = \$116$$

- 18) The graph shows the calories burned for hiking and downhill skiing.

- a) Find the slope of each line.

$$\text{Skiing} = 8 \text{ cal/min}$$

$$\text{Hiking} = 6 \text{ cal/min}$$

- b) How many more calories do you, burn per minute downhill skiing than hiking?

2 calories

- c) How many calories would you burn if you went downhill skiing for 80 minutes?

$$8 \text{ cal/min} \times 80 \text{ minutes} = 640 \text{ calories}$$

