

Lesson 4.6 Review & Refresh

1.6 m.k. / m.k.

1. You and your friend drive 12 miles to work. You drive $2\frac{1}{2}$ miles in 4 minutes. Your friend drives 2 miles in 3 minutes.

- a. Who gets to work first?
 you $\frac{2\frac{1}{2} \text{ mi}}{4 \text{ min}} = \frac{12 \text{ mi}}{x} = 19.2 \text{ min}$
 friend $\frac{2 \text{ mi}}{3 \text{ min}} = \frac{12 \text{ mi}}{x \text{ min}} = 18 \text{ min}$

b. Find the difference in the time it takes each of you to get to work.

$19.2 - 18 = 1.2 \text{ minutes}$

Solve the proportion.

2. $\frac{2}{3} = \frac{94}{a}$ $a=141$ 3. $\frac{15}{2} = \frac{g}{6}$ $g=45$ 4. $\frac{3.1}{5} = \frac{m}{4}$ $m=2.48$ 5. $\frac{n}{1.1} = \frac{9}{9.9}$ $n=1$

Tell whether x and y are proportional. $y \div x$

6.

x	$\frac{3}{4}$	1	$\frac{5}{4}$
y	$\frac{10}{3}$	$\frac{13}{3}$	$\frac{16}{3}$

 $4\frac{4}{3}$ $4\frac{1}{3}$ $4\frac{4}{5}$
 no

7.

x	$\frac{1}{3}$	$\frac{2}{3}$	1
y	$\frac{5}{18}$	$\frac{5}{9}$	$\frac{5}{6}$

 $\frac{5}{6}$ $\frac{5}{6}$ $\frac{5}{6}$
 yes

Tell whether the rates are equivalent. Justify your answer.

9. 4 inches in 2.5 years 1.6
 1 foot in 7.5 years 1.6 yes
 12 in
10. $2\frac{1}{2}$ miles in $\frac{1}{2}$ hour 5
 $\frac{1}{4}$ mile in $\frac{1}{10}$ hour 2.5 no

Find the value of x so that the ratios are equivalent.

11. $1 : 16$ and $8 : x$ 12. $x : 0.5$ and $8 : 4$ 13. $x : \frac{1}{4}$ and $16 : 1$
 $\frac{1}{16} = \frac{8}{x}$ $x=128$ $\frac{x}{0.5} = \frac{8}{4}$ $x=1$ $\frac{x}{\frac{1}{4}} = \frac{16}{1}$ $x=64$

17. There are 400 people at a play. The ratio of males to females is $1 : 4$. Find the number of females.

$\frac{x}{400} = \frac{4}{5}$ $x=320 \text{ females}$

18. During a basketball season, you score 240 points in 30 games. Your friend scores 225 points in 25 games. Do these rates form a proportion? Justify your answer.

$\frac{240 \text{ pts}}{30 \text{ games}} = \frac{225 \text{ pts}}{25 \text{ games}}$ $8 = 9$ no

19. You can type 25 words in $\frac{1}{2}$ minute. Find the number of words typed in 6 minutes.

$\frac{25 \text{ words}}{\frac{1}{2} \text{ min}} = \frac{x}{6 \text{ min}}$ $x=300 \text{ words}$

4.6 Puzzle Time

Who Do Whales Go To See When Their Teeth Need To Be Fixed?

Write the letter of each answer in the box containing the exercise number.

Solve the proportion.

1. $\frac{3}{5} = \frac{h}{20}$ $h=12$

2. $\frac{4}{7} = \frac{24}{a}$ $a=42$

3. $\frac{1}{x} = \frac{5}{45}$ $x=9$

4. $\frac{2}{13} = \frac{m}{39}$ $m=6$

5. $\frac{t}{28} = \frac{3}{4}$ $t=21$

6. $\frac{18}{21} = \frac{6}{w}$ $w=7$

7. $\frac{3.4}{4.2} = \frac{r}{21}$ $r=17$

8. $\frac{1.5}{2.5} = \frac{6}{s}$ $s=10$

9. $\frac{q}{1.7} = \frac{16}{17}$ $q=1.6$

10. $\frac{2.2}{n} = \frac{44}{66}$ $n=3.3$

11. You need 3 tickets for one go-kart ride. How many tickets do you need for five go-kart rides? 15

12. Yesterday you downloaded 3 songs for \$2.97. How many songs did you download today for \$3.96?

$\frac{3 \text{ songs}}{\$2.97} = \frac{x}{\$3.96}$ $x=4$

13. There are 32 students in the school play. The ratio of girls to all students in the play is 5 : 8. How many girls are in the play?

$\frac{x}{32} = \frac{5}{8}$ $x=20$

14. Two out of three vehicles in a parking lot are SUVs. There are 18 SUVs in the parking lot. How many vehicles are in the parking lot?

$\frac{2}{3} = \frac{18}{x}$ $x=27$

Answers	
I. 27	T. 10
O. 12	H. 9
T. 1.6	N. 17
D. 4	C. 20
E. 7	T. 3.3
A. 42	R. 21
S. 6	O. 15

9	3	6		11	5	13	2	-	12	1	7	10	14	4	8
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