

Chapter 5 Practice Test

Write the ratio as a fraction in simplest form. Include **UNITS!!!**

1. 48 worksheets : 12 students

$$\frac{48 \text{ ws}}{12 \text{ s}} = \frac{4 \cancel{8} \text{ ws}}{\cancel{12} \text{ s}} = \frac{4 \text{ ws}}{1 \text{ s}}$$

2. 35 frogs to 21 lizards

$$\frac{35 \text{ frogs}}{21 \text{ lizards}} = \frac{5 \cancel{7} \text{ frogs}}{3 \cancel{7} \text{ lizards}}$$

Find the unit rate.

3. 250 kilometers in 25 hours

$$\frac{250 \text{ km}}{25 \text{ hrs}} = \frac{25 \cancel{0} \text{ km}}{\cancel{25} \text{ hrs}} = \frac{10 \text{ km}}{1 \text{ hr}}$$

4. \$15 for 4 quarts

$$\frac{\$15}{4 \text{ qt}} = \frac{\$3.75}{1 \text{ qt}}$$

$$4 \overline{) 15} = 3.75$$

1. $\frac{4 \text{ ws}}{1 \text{ s}}$

2. $\frac{5 \text{ frogs}}{3 \text{ liz}}$

3. $\frac{10 \text{ km}}{1 \text{ hr}}$

5. You and your cousin want to buy a present for your grandma. You put all of your money together. The ratio of your money to your cousin's money is 2 to 5. If you have \$24, how much money does your cousin have?

part total $\frac{2}{5} = \frac{24}{y}$ $y = \$60$

$$\frac{2}{5} = \frac{24}{y} \Rightarrow y = 60$$

4. $\frac{\$3.75}{1 \text{ qt}}$

5. $y = \$60$

For problems 6 and 7, tell whether the ratios form a proportion. **SHOW YOUR WORK!**

6. $\frac{48 \text{ s}}{20 \text{ ft}} = \frac{24 \text{ s}}{10 \text{ ft}}$ **NO**

7. $\frac{5 \text{ qt}}{8 \text{ qt}} = \frac{42.5}{68}$ **yes**
 $5(68) = 8(42.5)$
 $340 = 340$

$$\frac{68}{340} = \frac{42.5}{3400}$$

6. **NO**

7. **yes**

8. The table shows the rates for the cost of different size Jamba Juice drinks. Are the rates proportional?

Ounces	Cost
30	\$4
60	\$8
105	\$15

$$\frac{30 \text{ oz}}{\$4} = \frac{105 \text{ oz}}{\$15}$$

$$\frac{105}{420} = \frac{4}{160}$$

NO
 $30(15) = 450$
 $4(105) = 420$

$30 \cdot 8 = 60 \cdot 4$
 $240 = 240$

8. **NO**

9. **NO**

Tell whether x and y are proportional.

9.

x	5	10	15	20
y	1	3	5	7

different multipliers

NO
 All one times 2.5

10.

x	2	3	4	5
y	5	7.5	10	12.5

yes
 $4(2.5) = 10$ $5(2.5) = 12.5$

10. **yes**

NO

For problems 10 and 11, Use the table to **WRITE AND SOLVE A PROPORTION.**

11.	Fun Sized	Regular Size
Candies	17	68
Bag	s	1000

$$\frac{17}{s} = \frac{68}{1000}$$

$\swarrow \div 4$
 $\searrow \div 4$

$$s = 250$$

12.	Tank A	Tank B
Fish	6	f
Gallons	10	55

$$\frac{6}{10} = \frac{f}{55}$$

$\times 11$
 $\times 11$

$$f = 33$$

#11

$$\frac{17}{68} = \frac{s}{1000}$$

$$s = 250$$

#12

$$\frac{6}{10} = \frac{f}{55}$$

13. You can buy 5 pounds of grapes for \$9.95. **WRITE** and **SOLVE** a **PROPORTION** that gives the cost (c) if you buy 4 pounds of grapes.

5 lbs → 4 lbs

$$5(x) = 4(9.95)$$

$$5x = 39.80$$

$$x = 7.96$$

OR Use X-products

Solve the proportion.

14. $\frac{w}{84} = \frac{5}{7}$

$w = 60$

Unit rate: $\frac{\$1.99}{1lb}$

$$\frac{\$1.99}{1lb} \times 4lb = 7.96$$

15. $\frac{2.3}{1.8} = \frac{a}{18}$

$2.3 \times 10 = 23$

14. $w = 60$

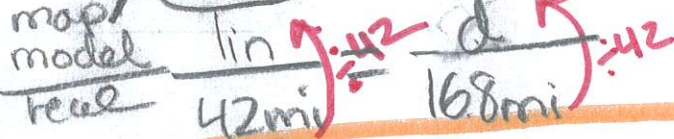
17. $\frac{t}{6.5} = \frac{1.2}{1.3}$

$1.3t = 6.5(1.2)$
 $1.3t = 7.8$
 $t = 6$

15. $a = 23$

16. $x = 0.8$

18. The scale on a map is 1 in.:42 mi. The actual distance between two cities is 168 miles. What is the distance between the cities on the map?



$$\frac{1}{42} = \frac{d}{168}$$

$$d = 4 \text{ in}$$

17. $t = 6$

18. $d = 4 \text{ in}$

19. If a scale is 1 cm : 6 km, what is the scale FACTOR? (1 km = 100,000 cm)

$$\frac{1 \text{ cm}}{6 \text{ km}} \times \frac{1 \text{ km}}{100,000 \text{ cm}}$$

Change to the same units!

19. $\frac{1}{600,000}$
NO UNITS!

Find the missing dimension. Use the scale factor 1 : 8.

20. Model length: 4 cm
Actual length: ? cm

$$\frac{1}{8} = \frac{4}{x}$$

$$x = 32 \text{ cm}$$

21. Drawing width: ? cm
Actual width: 128 cm

$$\frac{1}{8} = \frac{x}{128}$$

$$x = 16 \text{ cm}$$

20. $L = 32 \text{ cm}$

21. $w = 16 \text{ cm}$

22. There are 35 computers in a computer cart. The ratio of Yogas to Chrome Books is 3 to 2. Determine how many of each type of computer are in the cart?

Part Total $\frac{y}{35} = \frac{3}{5}$

Yogas = 21

35 ← total
-21 ← yogas
14 Chrome

22. Yogas: 21
Chromes: 14

Total of 35