Unit 1 - Ratios and Proportional Relationships

Review Guide Math 8

Answers:

Identify what is asked.

RATIO 1. The co

1. The comparison or relationship between two things.

TERM 2. The name for the values in a ratio.

RATE

3. A special ratio that compares quantities of different units.

UNITRATE 4. A rate where the second term is equal to 1.

EQUIVALENT 5. Ratios that have equal simplest form.

RATIO

6

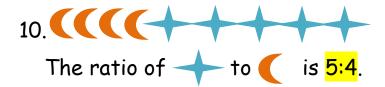
6. The value of x that will make the ratios 3:4 and x:8 equivalent.

PROPORTION 7. The equality of two ratios or fractions.

PERCENT 8. It is a number expressed as a fraction of 100.

Write the ratio of the given objects.





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11.

The ratio of \bigcirc to the total number of hearts is 3:7.

Find the unknown term in the given equivalent ratios.

12.21:24 = 28:x

x = 32

13. 25:75 = x:3

 $\times = 1$

14. x:48 = 10:40

x = 12

Use the symbols (<, >, =) to compare the given pairs of ratios.

15. 36:12 <mark>=</mark> 12:4

16. 7:8 **>** 11:13

17. 14:63 <mark>=</mark> 4:18

18. 13:24 < 18:6

19. 16:6 <mark><</mark> 14:4

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Tell whether the given proportions are TRUE or FALSE.

False 20. 3:25 = 75:100

False 21. 12:16 = 24:48

True 22. 11:44 = 8:32

Complete the table with the correct values.

	Fractions	Percent	Decimal
23.	9 25	36%	<mark>0.36</mark>
24.	9 20	<mark>45%</mark>	0.45
25.	23 100	23%	<mark>0.23</mark>
26.	17 25	<mark>68%</mark>	0.68
27.	25 3 4	<mark>75%</mark>	<mark>0.75</mark>
28.	8 25	<mark>32%</mark>	0.32
29.	4 - 5	<mark>80%</mark>	<mark>0.80</mark>
30.	71 100	71%	<mark>0.71</mark>

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Convert the following units using RATIO.

31. 0.05 kilometers = $\frac{50}{9}$ meter/s

32. $1000 \text{ pounds} = \frac{0.5}{1000} \text{ ton/s}$

33. 375 milliliters = 0.375 liter/s

34. 7.2 inches = 0.6 feet

35. 0.08 kilograms = 80000 milligram/s

Solve the following problems.

36. To make lemonade, 5 liters of water for every 8 lemons are needed. To make more lemonade, one needs 5 times the quantity. What is the ratio of water to lemonade of the new mixture?

Solution: 25:40

37. If Tony can type 180 words in 3 minutes and Phil can type 210 words in 5 minutes, who types faster?

Solution: Tony can type faster at 60 words per minute.

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- 38. James went on a vacation and had spent $\frac{5}{7}$ of her money.
 - a. What percent of his money did she already spend? Solution: 71%
 - b. What percent of his money does she have left? Solution: 29%
 - c. Express the money he has left in fraction. Solution: $\frac{2}{7}$
- 39. Chris has a piece of wood 1.2 meters long. If he cuts it into 3 equal equal parts, how long will each piece be in millimeters?

Solution: Each piece of wood cost 0.4 meters.

0.4 meters = 400 millimeters