

Do NOT use a calculator to work these problems.

**Write the ratio using fractional notation.**

1) 11 to 27 1) \_\_\_\_\_

**Write the sentence as a proportion.**

2) \$72 is to 16 bottles as \$81 is to 18 bottles. 2) \_\_\_\_\_

**Determine whether the proportion is true or false.**

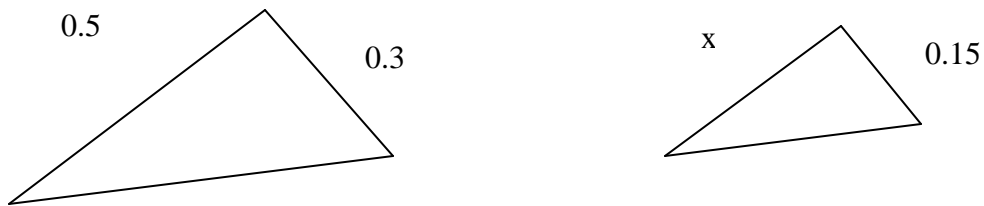
3)  $\frac{45}{40} = \frac{27}{24}$  3) \_\_\_\_\_

**Solve the proportion for the given variable.**

4)  $\frac{54}{9} = \frac{24}{x}$  4) \_\_\_\_\_

**Given that the pair of triangles is similar, find the length of the side labeled x.**

5) 5) \_\_\_\_\_



**Fill in the blank with one of the words or phrases listed below.**

**Rate**                      **Unit Rate**                      **Ratio**    **Unit Price**  
**Proportion**            **Similar**                      **Congruent**

6) A(n) \_\_\_\_\_ is the quotient of two numbers. It can be written as a fraction, using a colon, or using the words “to.” 6) \_\_\_\_\_

7)  $\frac{x}{2} = \frac{7}{16}$  is an example of a(n) \_\_\_\_\_. 7) \_\_\_\_\_

8) A(n) \_\_\_\_\_ is a rate with a denominator of 1. 8) \_\_\_\_\_

9) A(n) \_\_\_\_\_ is a “money per item” unit rate. 9) \_\_\_\_\_

10) A(n) \_\_\_\_\_ is used to compare different kinds of quantities. 10) \_\_\_\_\_

11) ? \_\_\_\_\_ triangles have exactly the same shape but not necessarily the same size. 11) \_\_\_\_\_

**Write the rate as a fraction in simplest form.**

12) 395 miles in 10 hours 12) \_\_\_\_\_

13) A basketball player made 58 out of 100 attempted free throws.  
What percent of free throws was made? 13) \_\_\_\_\_

**Write the percent as a decimal.**

14) 200% 14) \_\_\_\_\_

15) 3.8% 15) \_\_\_\_\_

16) Bracelets made up 46.3% of the total revenue for a small specialty store. 16) \_\_\_\_\_

17) 35% of students at a small college lived at home while attending classes. 17) \_\_\_\_\_

**Write the decimal as a percent.**

18) Mario saved 0.4 of what he earned over the summer. 18) \_\_\_\_\_

19) In a large city, 0.129 of the budget went toward city workers' salaries. 19) \_\_\_\_\_

**Write the percent as a fraction or mixed number in simplest form.**

20) 45% 20) \_\_\_\_\_

**Write the fraction or mixed number as a percent.**

21)  $\frac{21}{4}$  21) \_\_\_\_\_

22)  $3\frac{1}{5}$  22) \_\_\_\_\_

23) In a surveyed area, 8.6% of the residents signed up for the local park district pool pass. Write this percent as a decimal. 23) \_\_\_\_\_

24) Approximately 15.3% of all students at a city college commute to school. Write this percent as a fraction or mixed number in simplest form. 24) \_\_\_\_\_

25) In a particular city,  $\frac{1}{25}$  of the residents subscribe to the local newspaper. Write this fraction as a percent. 25) \_\_\_\_\_

**Translate the question to an equation or proportion. Do not solve.?**

26) 23% of 7 is what number? 26) \_\_\_\_\_

27) 67% of what number is 95? 27) \_\_\_\_\_

28) 20.6 is 10% of what number? 28) \_\_\_\_\_

29) What percent of 38 is 83? 29) \_\_\_\_\_

30) 7.5 is what percent of 75? 30) \_\_\_\_\_

Fill in the blank with one of the words or phrases listed below.

Percent	Of	Amount	100%	Compound Interest
Base	Is	0.01	$\frac{1}{100}$	

31) In a mathematical statement, \_\_\_\_\_ usually means “multiplication.” 31) \_\_\_\_\_

32) In a mathematical statement, \_\_\_\_\_ usually means “equals.” 32) \_\_\_\_\_

33) \_\_\_\_\_ means “per hundred.” 33) \_\_\_\_\_

34) The number 1 written as a percent is \_\_\_\_\_. 34) \_\_\_\_\_

- 1)  $\frac{11}{27}$
- 2)  $\frac{72}{16} = \frac{81}{18}$
- 3) True
- 4)  $x = 4$
- 5) 0.25
- 6) ratio
- 7) proportion
- 8) unit rate
- 9) unit price
- 10) rate
- 11) Similar
- 12)  $\frac{79 \text{ miles}}{2 \text{ hours}}$
- 13) 58%
- 14) 2
- 15) 0.038
- 16) 0.463
- 17) 0.35
- 18) 40%
- 19) 12.9%
- 20)  $\frac{9}{20}$
- 21) 525%
- 22) 320%
- 23) 0.086
- 24)  $\frac{153}{1000}$
- 25) 4%
- 26)  $23\% \cdot 7 = x$  or  $\frac{x}{7} = \frac{23}{100}$
- 27)  $67\% \cdot x = 95$  or  $\frac{95}{x} = \frac{67}{100}$
- 28)  $20.6 = 10\% \cdot x$  or  $\frac{20.6}{x} = \frac{10}{100}$
- 29)  $x\% \cdot 38 = 83$  or  $\frac{83}{38} = \frac{x}{100}$
- 30)  $7.5 = x\% \cdot 75$  or  $\frac{7.5}{75} = \frac{x}{100}$
- 31) Of
- 32) Is
- 33) Percent
- 34) 100%