Review for Chapter Six Exam

Write each ratio using fractional notation. Do not simplify.

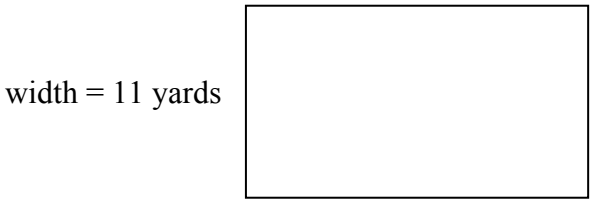
1. 5.9 to 1.4

2. $6\frac{2}{5}$ to $1\frac{5}{6}$

Write each ratio as a ratio of whole numbers using fractional notation. Write the fraction in simplest form.

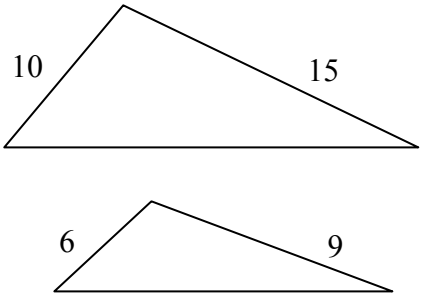
3. According to an organization's membership list, it has 2750 members who have children and 2000 members who are childless. What is the ratio of members who have children to members who are childless?

4. Find the ratio of the width to the perimeter of the rectangular dog run sketched below.



Find each ratio of the corresponding sides of the given similar triangles. Write the ratio in simplest form.

5.



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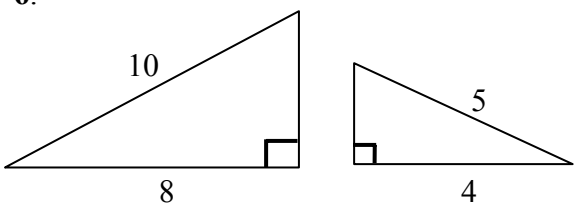


Write each rate as a fraction in simplest form.

7. 11 cars for 66 people

8. 77 printers for 84 computers

Write each rate as a unit rate.

9. 450 miles on 10 gallons of gas

10. 10 cents for 5 marbles

Find the unit price.

11. \$41.60 for 4 cassette tapes

12. Find which is the better buy (lower cost per ounce) by finding each unit price rounded to three decimal places if necessary. Assume that different sizes of the same brand are being compared.

Shampoo:
\$6.72 for 12 ounces
\$9.90 for 18 ounces

Write each sentence as a proportion.

13. 5 diamonds is to 11 rubies as 15 diamonds is to 33 rubies

14. \$42 is to 35 bottles as \$30 is to 25 bottles

Write 'True' if the statement is true and 'False' is the statement is false.

15. $\dfrac{1\frac{1}{8}}{2\frac{1}{4}} = \dfrac{7}{4}$

16. $\dfrac{24}{18} = \dfrac{4}{3}$

Solve each proportion for the given variable. Round the solution where indicated.

17. $\dfrac{x}{57} = \dfrac{5}{19}$

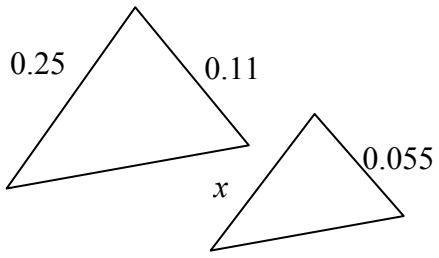
18. $\dfrac{1}{6} = \dfrac{x}{56}$

19. $\dfrac{16}{x} = \dfrac{8}{\frac{1}{3}}$

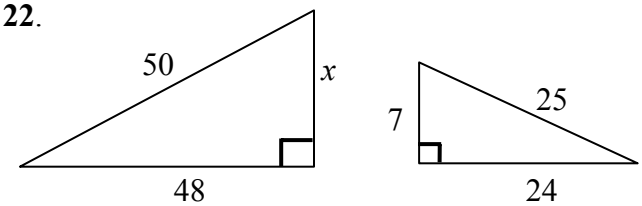
20. $\dfrac{61}{3} = \dfrac{7}{z}$ Round to the nearest thousandth.

Given that the pairs of triangles are similar, find the unknown length *x*.

21.



22.



Solve.

23. On an architect's blueprint, 1 inch corresponds to 12 feet. Find the length of a wall represented by a line $6\frac{1}{4}$ inches long on the blueprint. Round to the nearest tenth if necessary.

24. A bag of fertilizer covers 2000 square feet of lawn. Find how many bags of fertilizer should be purchased to cover a rectangular lawn 110 feet by 140 feet.

25. A fire fighter needs to estimate the height of a burning building. She estimates the length of her shadow to be 8 feet long and the length of the building's shadow to be 72 feet long. Find the height of the building if the fire fighter is $5\frac{1}{3}$ feet tall. Round to the nearest tenth if necessary.

26. On an architect's blueprint, 1 inch corresponds to 6 feet. If an exterior wall is 8 feet long, find how long the blueprint measurement should be. Write answer as a mixed number if necessary.

27. If a flagpole 12 feet tall casts a shadow that is 16 feet long, find the length of the shadow cast by an antenna which is 30 feet tall. Round to the nearest tenth if necessary.

ANSWERS

1. $\frac{5.9}{1.4}$ **2.** $\frac{6\frac{2}{5}}{1\frac{5}{6}}$ **3.** $\frac{11}{8}$ **4.** $\frac{11}{54}$ **5.** $\frac{3}{5}$ **6.** $\frac{1}{2}$ **7.** $\frac{1\text{ car}}{6\text{ people}}$ **8.** $\frac{11\text{ printers}}{12\text{ computers}}$

9. 45 miles/gallon **10.** 2 cents/marble **11.** \$10.40/cassette tape **12.** \$9.90 for 18 ounces

13. $\frac{5}{11}=\frac{15}{33}$ **14.** $\frac{42}{35}=\frac{30}{25}$ **15.** False **16.** True **17.** 15 **18.** $9\frac{1}{3}$ **19.** $\frac{2}{3}$ **20.** 0.344

21. 0.125 **22.** $x=14$ **23.** 75 feet **24.** 8 bags **25.** 48 feet **26.** $1\frac{1}{3}$ inches **27.** 40 feet