7-1 Practice
Proportions

1. **NUTRITION** One ounce of cheddar cheese contains 9 grams of fat. Six of the grams of fat are saturated fats. Find the ratio of saturated fats to total fat in an ounce of cheese.

2. **FARMING** The ratio of goats to sheep at a university research farm is 4:7. The number of sheep at the farm is 28. What is the number of goats?

3. **ART** Edward Hopper's oil on canvas painting *Nighthawks* has a length of 60 inches and a width of 30 inches. A print of the original has a length of 2.5 inches. What is the width of the print?

Solve each proportion.

4. $\dfrac{5}{8} = \dfrac{x}{12}$

5. $\dfrac{x}{1.12} = \dfrac{1}{5}$

6. $\dfrac{6x}{27} = \dfrac{4}{3}$

7. $\dfrac{x+2}{3} = \dfrac{8}{9}$

8. $\dfrac{3x-5}{4} = \dfrac{-5}{7}$

9. $\dfrac{x-2}{4} = \dfrac{x+4}{2}$

Find the measures of the sides of each triangle.

10. The ratio of the measures of the sides of a triangle is 3:4:6, and its perimeter is 104 feet.

11. The ratio of the measures of the sides of a triangle is 7:9:12, and its perimeter is 84 inches.

12. The ratio of the measures of the sides of a triangle is 6:7:9, and its perimeter is 77 centimeters.

Find the measures of the angles in each triangle.

13. The ratio of the measures of the angles is 4:5:6.

14. The ratio of the measures of the angles is 5:7:8.

15. **BRIDGES** The span of the Benjamin Franklin suspension bridge in Philadelphia, Pennsylvania, is 1750 feet. A model of the bridge has a span of 42 inches. What is the ratio of the span of the model to the span of the actual Benjamin Franklin Bridge?

7-1 Practice

Proportions

1. **NUTRITION** One ounce of cheddar cheese contains 9 grams of fat. Six of the grams of fat are saturated fats. Find the ratio of saturated fats to total fat in an ounce of cheese.

$2:3$

2. **FARMING** The ratio of goats to sheep at a university research farm is 4:7. The number of sheep at the farm is 28. What is the number of goats?

16

$4:7$
$G:S$

$\frac{4}{7} = \frac{G}{28}$

3. **ART** Edward Hopper's oil on canvas painting *Nighthawks* has a length of 60 inches and a width of 30 inches. A print of the original has a length of 2.5 inches. What is the width of the print?

$1.25 in$

Solve each proportion.

4. $\frac{5}{8} = \frac{x}{12}$ $X = 7.5$

5. $\frac{x}{1.12} = \frac{1}{5}$ $X = 0.224$

6. $\frac{6x}{27} = \frac{4}{3}$ $X = 6$

7. $\frac{x+2}{3} = \frac{8}{9}$ $X = \frac{2}{3}$

8. $\frac{3x-5}{4} = \frac{-5}{7}$ $X = \frac{5}{7}$

9. $\frac{x-2}{4} = \frac{x+4}{2}$ $X = -10$

Find the measures of the sides of each triangle.

10. The ratio of the measures of the sides of a triangle is 3:4:6, and its perimeter is 104 feet.

$24ft, 32ft, 48ft$

11. The ratio of the measures of the sides of a triangle is 7:9:12, and its perimeter is 84 inches.

$21in, 27in, 36in$

12. The ratio of the measures of the sides of a triangle is 6:7:9, and its perimeter is 77 centimeters. $24.5in, 31.5in$

$21in, 24.5in, 31.5in$

$6x + 7x + 9x = 77$
$X = 3.5$

Find the measures of the angles in each triangle.

13. The ratio of the measures of the angles is 4:5:6. $4x + 5x + 6x = 180$

$48°, 60°, 72°$

14. The ratio of the measures of the angles is 5:7:8.

$45°, 63°, 72°$

15. **BRIDGES** The span of the Benjamin Franklin suspension bridge in Philadelphia, Pennsylvania, is 1750 feet. A model of the bridge has a span of 42 inches. What is the ratio of the span of the model to the span of the actual Benjamin Franklin Bridge?

$1/500$

$\frac{42}{21000} = \frac{1}{500}$