

Ratios

For numbers 1-6, solve for x

1. $\frac{x}{7} = \frac{12}{21}$

2. $\frac{2}{8} = \frac{4}{x}$

3. $\frac{6}{x} = \frac{5}{15}$

4. $\frac{3}{x} = \frac{5}{20}$

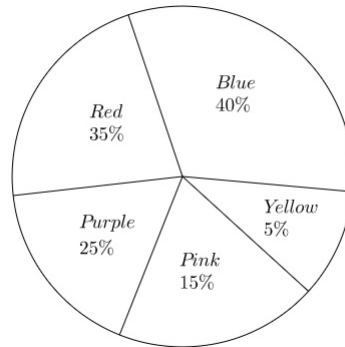
5. $\frac{7}{x} = \frac{3}{7}$

6. $\frac{2}{3} = \frac{x}{18}$

7. In a certain right triangle, the shorter side of the triangle was 7cm and the hypotenuse was 13cm. If the shorter side of second similar triangle was 12cm what is the length of the hypotenuse of this new triangle? (Round to the nearest tenth if necessary.)
8. If the area of circle A is 16π and the area of circle B is 25π , what is the ratio of the radius of circle B to the radius of circle A?
9. A cylindrical can of soda with a radius of 2cm is filled to a height of 5cm. A cylindrical glass with a radius of 3cm is filled with water to a height of 4cm. What is the ratio of the volume of the liquid in the can to the volume of the liquid in the glass? (The volume of a cylinder is given by $V = \pi r^2 h$, with r is the radius of the cylinder and h is the height of the cylinder)
10. Julie wants to re-size and blow up a photo she took of a mountain range when she went camping. In the original 4in \times 6in photo (height \times width), the tallest mountain peak is 3in tall. If she wants the tallest mountain peak to be 1ft tall, to what size must she blow up the photo?
11. Sandra is going on a picnic in the park. In her picnic basket the ratio of sandwiches to brownies is 4:5. The ratio of drinks to brownies is 3:5. What is the ratio of sandwiches to drinks in the picnic basket?
12. The sun casts a 24ft long shadow of a flag pole that is 16ft tall. How long will the shadow be of a person who is standing right next to the flag pole, if the person is 6ft tall?

Questions 13-15 will be asked based on the following data:

A study was conducted to find out what colors are the favorites of elementary students. The study took a poll of 200 students, and their favorite colors are given by the pie chart below:



13. If this poll was representative of the 800 students in the elementary school, how many students have purple as their favorite color?
14. What is the ratio of students who have pink as a favorite color, to students who have blue as a favorite color?
15. What is the ratio of students who like red the most, to students who like a color other than red?