

7.1 – Ratios and Proportions

Write the ratio of the first measurement to the second measurement.

- 1) diameter of a salad plate: 8 in. diameter of a dinner plate: 1 ft. _____
- 2) garden container width: 2 ft 6 in. garden container length: 8 ft. _____
- 3) width of a canoe: 28 in. length of a canoe: 12 ft. 6 in. _____
- 4) height of a book: 11 in. height of a bookshelf: 3 ft. 3 in. _____

- 5) The perimeter of a rectangle is 280 cm. The ratio of the width to the length is 3 : 4. What is the length of the rectangle?

- 6) The ratio of country albums to jazz albums in a music collection is 2 : 3. If the music collection has 45 albums, how many are country albums?

- 7) The lengths of the sides of a triangle are in the extended ratio 3 : 6 : 8. The triangle's perimeter is 510 cm. What are the lengths of the sides?

Solve each proportion. Show all work.

8) $\frac{x}{4} = \frac{13}{52}$

9) $\frac{9}{10} = \frac{9x}{70}$

$$10) \frac{2}{7} = \frac{b+1}{56}$$

$$11) \frac{x}{2x+1} = \frac{16}{40}$$

Use the proportion $\frac{x}{z} = \frac{6}{5}$. Complete each statement. Justify your answer.

$$12) \frac{x}{6} = \frac{\square}{\square}$$

$$13) \frac{x+z}{z} = \frac{\square}{\square}$$

$$14) \frac{z}{x} = \frac{\square}{\square}$$

$$15) 5x = \square$$

16) The measures of two consecutive angles in a parallelogram are in the ratio 4 : 11. What are the measures of the four angles of the parallelogram?

17) A band director needs to purchase new uniforms. The ratio of small to medium to large uniforms is 3 : 4 : 6.

a. If there are 260 total uniforms to purchase, how many will be small?

b. How many of these uniforms will be medium?

c. How many of these uniforms will be large?