

1. Solve each proportion using cross products.

a)

$$\frac{x+1}{6} = \frac{x-1}{x}$$

x = _____

b)

$$\frac{3}{4} = \frac{9}{x-7}$$

x = _____

c)

$$\frac{x-9}{x} = \frac{2}{5}$$

x = _____

d)

$$\frac{x}{5} = \frac{4}{16}$$

x = _____

2. Solve the following problems. (Show all work)

a) A picture is 3 in. wide by 5 in. high was enlarged so that the width was 15 inches. How high is the enlarged picture?

b) A triangle's three angles are in the ratio of 5:7:8. What is the measure of the smallest angle?

c) A 6 foot high school boy casts a shadow of 24 inches. At the same time of day a girl at the elementary school park casts a shadow of 14 inches. How tall is she (in feet)?

3. What would be the best (most specific) name for the shape that has the following ratios for it ANGLES.

a) 3:4:3 _____

b) 4:5:4:5 _____ or _____

c) 2:2:7:7 _____

d) 4: 4: 4: 4 _____ or _____

4. Solve the following problems. (show all work)

a) Points A, B, C, and D are placed in alphabetical order on a line so that $AB = 2BC = CD$. What is the ratio $BD : AD$?

b) Points A, B, and C are placed in alphabetical order on a line so that $3AB : AC$. What is the ratio of $AB : BC$?

c) Two numbers are in ratio 7:3. The sum of the two numbers is 36. What is the largest number?

d) Three numbers are in the ratio of 2:5:3. If the largest number is 65. What is the smallest number?