

January 22, 2015 ^{1st} _{2nd} Starter

A coin collector decides to divide his coin collection among his children. The oldest gets $\frac{1}{2}$ of the coins; the next gets $\frac{1}{4}$; the next gets $\frac{1}{5}$; and the youngest gets the rest which is 49 coins. How many coins are in the collection?



Franciscan

1/22 Scale, Maps and Zooming using Proportions



← not in scale

Find the distance between Milton and Centerville if they are 4 cm apart on a map with a scale of 2 cm : 5 km.

$$\text{scale} \left\{ \begin{array}{l} \frac{2 \text{ cm}}{5 \text{ km}} = \frac{4 \text{ cm}}{x} \\ 10 \text{ km} = x \end{array} \right.$$

Johnstown and Ashville are 20 mi from each other. How far apart would the cities be on a map that has a scale of 2 in : 5 mi?

$$\frac{x}{20 \text{ mi}} = \frac{4 \text{ in}}{5 \text{ mi}}$$
$$x = 8 \text{ in}$$

A model plane is 6 cm tall.
 If it was built with a scale of
 2 cm : 5 m, how tall is the real
 plane?

$$\frac{2\text{cm}}{5\text{m}} = \frac{6\text{cm}}{x}$$

$$15\text{m} = x$$



If a model motorcycle has a 1:18
 scale, how long will the finished
 model be if the real motorcycle
 is 81 in?

$$\frac{\text{model } 1.81}{\text{Real } 18.81} = \frac{x.18}{81\text{ in}.18}$$

$$81 = 18x$$

$$\frac{81}{18} = \frac{18x}{18}$$

$$4.5\text{in} = x$$



Amanda reduced the size of a photo to a height of 4 in. What is the new width if it was originally 12 in wide and 16 in tall?

$$\frac{W}{T} = \frac{12 \text{ in}}{16 \text{ in}} = \frac{4 \cdot X}{4 \cdot 4 \text{ in}}$$

$$\frac{12}{4} = \frac{4x}{4}$$

$$3'' = x$$

A triangle is 2 in wide and 1 in tall. If it is enlarged to a width of 8 in, how tall will it be?

$$\frac{W}{T} = \frac{2 \text{ in}}{1 \text{ in}} = \frac{8 \text{ in}}{x}$$

$$4 \text{ in} = x$$

Daniel reduced the size of a photo to a width of 3 in to turn it into a magnet for his locker. What is the new height of the photo was originally 8.4 in tall and 18.6 in wide?



$$\begin{array}{l} T \quad \frac{8.4''}{18.6''} = \frac{(6.2)x}{(6.2)3\text{in}} \\ W \end{array}$$

$$\begin{array}{r} 8.4 = 6.2x \\ \hline 6.2 \quad 6.2 \\ 1.4'' = x \end{array}$$

$$8.4 \div 6.2 = 1.354839$$

Homework

Blue WS 5

Due Monday