

# January 22, 2015 <sup>1st</sup> <sub>2nd</sub> 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



↑  
Scales with  
the map

← not accurate  
once you  
change  
size

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

The Scale  $\frac{2 \text{ cm}}{5 \text{ km}} = \frac{4 \text{ cm}}{x}$

$$10 \text{ km} = x$$

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?

$$\frac{2 \text{ in}}{5 \text{ mi}} = \frac{x}{20 \text{ mi}}$$
$$8 \text{ in} = x$$

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?

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

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



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

$$\frac{\text{model } 1}{\text{real } 18} = \frac{81}{x \cdot 18}$$

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

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



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?

original

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

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

$$3'' = x$$

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?

$$\frac{W}{T} = \frac{2 \text{ in} \cdot 4}{1 \text{ in} \cdot 4} = \frac{8 \text{ in}}{X}$$

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

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?



Homework  
Blue WS5

Due Monday