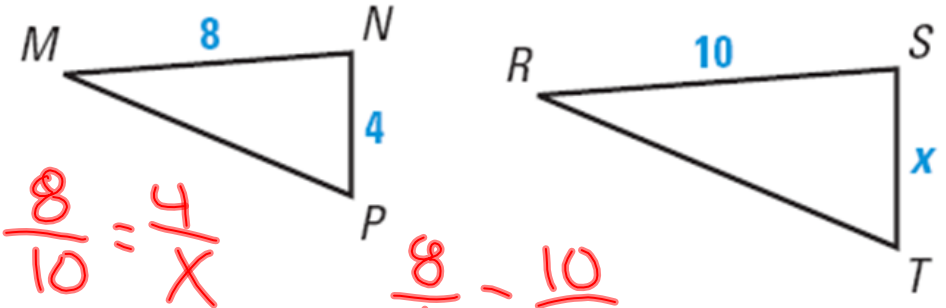
Chapter 6.2: Use Proportions to Solve Geometry Problems.

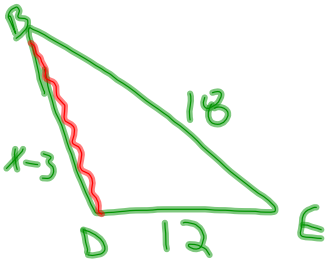
In the diagram the shapes are similar. What are some true proportions?

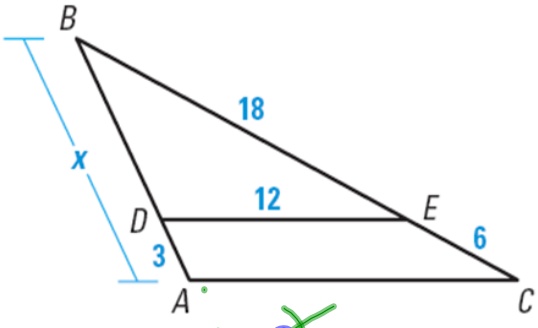


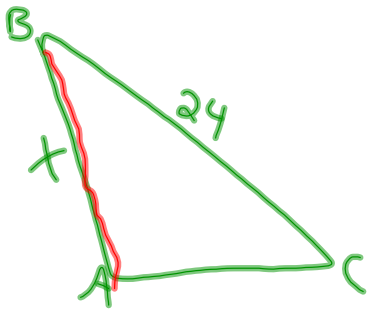
$\frac{8}{10} = \frac{4}{x}$ $\frac{8}{4} = \frac{10}{x}$

$\frac{10}{8} = \frac{x}{4}$

Find BA and BD in the diagram.







$\frac{18}{24} = \frac{(x-3)}{x}$

$24(x-3) = 18x$

$24x - 72 = 18x$

$-24x \quad -24x$

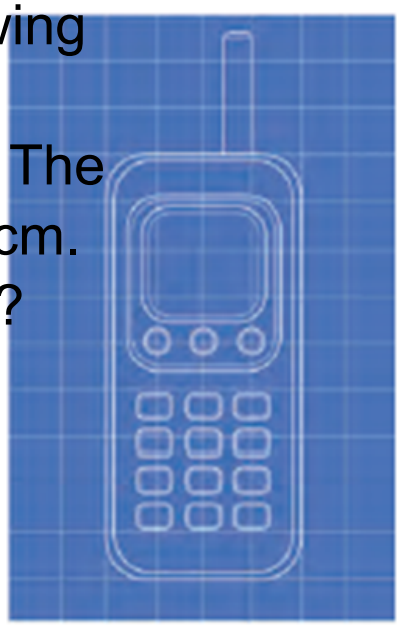
$\frac{-72}{-6} = \frac{-6x}{-6}$

$x = 12$

BA = 12 units

BD = 9 units

The blueprint shows a scale drawing of a cell phone. The length of the antenna on the blueprint is 5 cm. The actual length of the antenna is 2 cm. What is the scale of the blueprint?

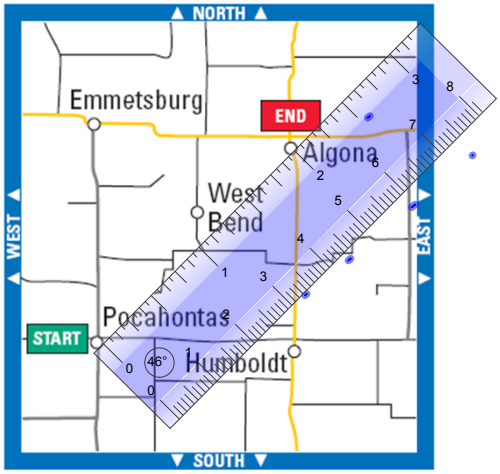


$\frac{\text{blueprint}}{\text{real}}$ $\frac{5\text{cm}}{2\text{cm}}$

$\frac{5}{2} : \frac{2}{2}$

1 : 2.5

The scale of the map at the right is 1 in: 26 miles. Find the actual distance from Pocahontas to Algona.



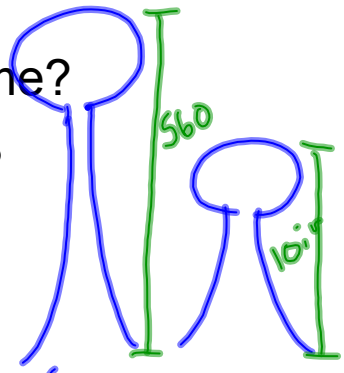
x = 52 miles

$\frac{\text{map } 1\text{in}}{\text{real } 26\text{mi}} = \frac{2\text{in}}{x}$

You buy a 3D scale model of the Reunion Tower in Dallas, TX. The actual building is 560 feet tall. Your model is 10 inches tall, the diameter of the dome on you scale model is about 2.1 inches.

- what is the diameter of the actual dome?

- how many times taller is the building?



$\frac{560Ft}{10in} = \frac{xFt}{2.1in}$

$\frac{10x}{10} = \frac{1176}{10}$

$x = 117.6ft$

$\frac{10in}{560ft} = \frac{10in}{6720in}$

Homework: Chapter 6.2 pg.367
#'s 4,12,16,17,22,28