Scale Drawings:

Used to represent objects that are too Big or too Small to draw

* Use Proportions to Solve *

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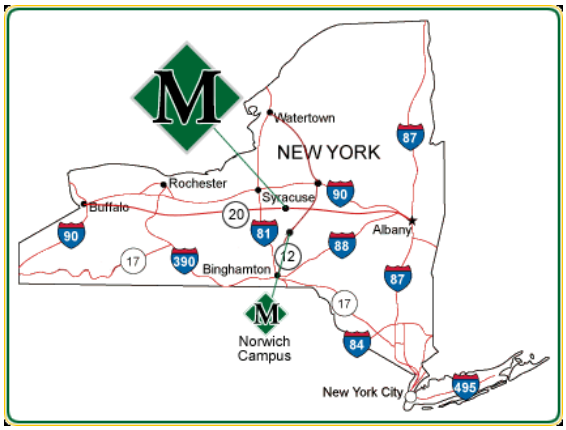

cm / Miles

Buffalo and Albany are 9cm apart on the given map. What is the actual distance of the two cities if 1cm = 32 miles?

Scale

$\frac{1cm}{32mi} = \frac{9cm}{x mi}$

X = 288 miles

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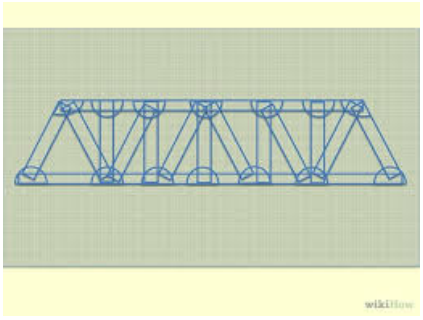

A model bridge uses a scale of 1/4 inch = 3 yards. The actual bridge is 50 yards long. Find the length of the model.

$\frac{in}{yd}$ $\frac{1/4}{3} = \frac{x}{50}$

$X = 4\frac{1}{6}$ inches

$\frac{3 \cdot x}{3} = \frac{12.5}{3}$

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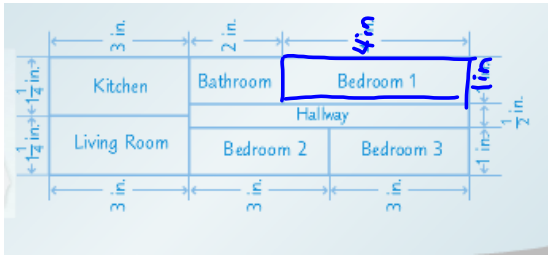

The floor plan for the home shown has a scale of 1/2 inch represents 3 feet of the actual home. What is the actual area of bedroom #1?

$\frac{1}{2}$ in = 3 ft

$A = lw$

Length | Width

$\frac{1/2}{3} = \frac{4}{x}$ $\frac{1/2}{3} = \frac{1}{x}$

$\frac{12}{1/2} = \frac{1/2 \cdot x}{1/2}$ $\frac{3}{1/2} = \frac{1/2 x}{1/2}$

$X = 24$ ft $X = 6$ ft

Area

24×6

144 ft^2

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Your Turn...

1. On a map, the distance from Akron to Cleveland measures 2 centimeters. What is the actual distance if the scale of the map shows that 1 centimeter is equal to 30 kilometers? (Example 1)

$\frac{cm}{Km}$ $30 \times 2 = 60km$

$\frac{1}{30} = \frac{2}{x}$

2. An engineer makes a model of a bridge using a scale of 1 inch = 3 yards. The length of the actual bridge is 50 yards. What is the length of the model? (Example 2)

$\frac{in}{yd}$

$\frac{1}{3} = \frac{x}{50}$

$\frac{50}{3} = \frac{3x}{3}$

$16.\overline{6}$ in

$16\frac{2}{3}$ in

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