

10/22/18

## Scale with maps and models.

Need scale because the actual object or place is too big or too small to use.

Map scale 3 in : 10 miles

The distance on the map is 36 in between Portland and Crater Lake.

How far is the actual distance?

$$\frac{3 \text{ in}}{10 \text{ mi}} = \frac{36 \text{ in}}{x \text{ mi}}$$

$$x = 120 \text{ mi}$$

Units do not need to be the same.

A model train car has a scale of 1:18

The actual train car is 16' 6" long.

How long is the model?

$$\frac{1 \text{ in}}{18 \text{ in}} = \frac{x}{198 \text{ in}}$$

$$x = 11 \text{ in}$$

or

$$\frac{1 \text{ ft}}{18 \text{ ft}} = \frac{x}{16.5 \text{ ft}}$$

$$x = .92 \text{ ft}$$