Pre-Algebra   Name_____Key_____

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10.4 Scale Drawings/Models

Answer each question and round your answer to the nearest whole number.

1) A map has a scale of 1 in : 6 mi. If Marion and Centerville are 30 mi apart, then they are how far apart on the map?

$$\frac{1 \text{ in}}{6 \text{ mi}} = \frac{X \text{ in}}{30 \text{ mi}} \qquad 6X = 30 \qquad X = 5 \text{ inches}$$

2) A map has a scale of 1 in : 20 mi. If Kumba and Brisbane are 160 mi apart, then they are how far apart on the map?

$$\frac{1 \text{ in}}{20 \text{ MI}} = \frac{X \text{ in}}{160 \text{ MI}} \qquad 20X = 160 \qquad X = 8 \text{ in}$$

3) Franklin and San Jose are 44 km from each other. How far apart would the cities be on a map that has a scale of 1 cm : 11 km?

$$\frac{1 \text{ cm}}{11 \text{ Km}} = \frac{X \text{ cm}}{44 \text{ km}} \qquad 11X = 44 \qquad X = 4 \text{ cm}$$

4) Centerville and Victoria are 6 in apart on a map that has a scale of 1 in : 8 mi. How far apart are the real cities?

$$\frac{1 \text{ in}}{8 \text{ MI}} = \frac{6 \text{ in}}{X \text{ MI}} \qquad 1X = 48 \text{ MI}$$

5) A map has a scale of 1 in : 19 mi. If Victoria and Rockville are 5 in apart on the map, then how far apart are the real cities?

$$\frac{1 \text{ in}}{19 \text{ MI}} = \frac{5 \text{ in}}{X \text{ MI}} \qquad 1X = 95 \text{ MI}$$

6) Georgetown and Greenwood are 22 km from each other. How far apart would the cities be on a map that has a scale of 1 cm : 11 km?

$$\frac{1 \text{ cm}}{11 \text{ Km}} = \frac{X \text{ cm}}{22 \text{ km}} \qquad 11X = 22 \qquad X = 2 \text{ cm}$$

7) A particular house is 14 m tall. A model of it was built with a scale of 1 cm : 2 m. How tall is the model?

$$\frac{1 \text{ cm}}{2 \text{ M}} = \frac{X \text{ cm}}{14 \text{ m}} \qquad 2x = 14 \qquad X = 7 \text{ cm}$$

8) A particular satellite is 16 ft wide. A model of it was built with a scale of 1 in : 2 ft. How wide is the model?

$$\frac{1 \text{ in}}{2 \text{ ft}} = \frac{X \text{ in}}{16 \text{ ft}} \qquad 2X = 16 \qquad X = 8 \text{ in}$$

9) Find the distance between Madison and Greenwood on a map with a scale of 1 cm : 17 km if they are actually 51 km apart.

$$\frac{1 \text{ cm}}{17 \text{ Km}} = \frac{X \text{ cm}}{51 \text{ Km}} \qquad 17X = 51 \qquad X = 3 \text{ cm}$$

10) A model plane has a scale of 1 in : 10 ft. If the model plane is 2 in tall, then how tall is the real plane?

$$\frac{1 \text{ in}}{10 \text{ ft}} = \frac{2 \text{ in}}{X \text{ ft}} \qquad 1X = 20 \text{ ft}$$

11) A map has a scale of 1 cm : 6 km. If San Jose and Midway are 4 cm apart on the map, then how far apart are the real cities?

$$\frac{1 \text{ cm}}{6 \text{ Km}} = \frac{4 \text{ cm}}{X \text{ Km}} \qquad 1X = 24 \text{ km}$$

12) Find the distance between Oak Grove and Yorkshire if they are 3 in apart on a map with a scale of 1 in : 7 mi.

$$\frac{1 \text{ in}}{7 \text{ MI}} = \frac{3 \text{ in}}{X \text{ MI}} \qquad 1X = 21 \text{ MI}$$

13) A model car has a scale of 1 in : 8 ft. If the model car is 2 in long, then how long is the real car?

$$\frac{1 \text{ in}}{8 \text{ ft}} = \frac{2 \text{ in}}{X \text{ ft}} \qquad 1X = 16 \text{ ft}$$

14) A model statue has a scale of 1 in : 3 ft. If the model statue is 5 in tall, then how tall is the real statue?

$$\frac{1 \text{ in}}{3 \text{ ft}} = \frac{5 \text{ in}}{X \text{ ft}} \qquad 1X = 15 \text{ ft}$$

15) Find the distance between Rivertown and San Jose on a map with a scale of 1 cm : 9 km if they are actually 54 km apart.

$$\frac{1 \text{ cm}}{9 \text{ KM}} = \frac{X \text{ cm}}{54 \text{ KM}} \qquad 9x = 54 \qquad X = 6 \text{ cm}$$

16) A map has a scale of 1 in : 17 mi. If Sun Valley and San Jose are 7 in apart on the map, then how far apart are the real cities?

$$\frac{1 \text{ in}}{17 \text{ MI}} = \frac{7 \text{ in}}{X \text{ MI}} \qquad 1X = 119 \text{ MI}$$