Name: ..... Class: .....

Scale drawings word problems

a. Charles drew the scale of a building and its parking lot. He used the scale 100 inch : 8 feet. In the drawing, the parking lot is 500 inches long. What is the length of the actual parking lot.

b. Mr. Freddy is an architect. He measured the length of the road and made a scale drawing. 1 inch represents 30 miles in the scale of the drawing. If the length of the road in real life is 600 miles, what is the length of the road in the drawing?

c. Peter is a very gifted artist. He designed a bridge in a drawing with a scale of 1 inch is to 25 miles. In the drawing, the length of the bridge is 20 inches, what is the length of the bridge in real life?

d. Stellar won a contract to do a scale drawing of a market. In real life, a store in the market is 60 feet long. If in the drawing it is 20 inches long, what is the scale of the drawing?

e. A landscape map has a scale of 1 inch: 24 kilometers in a drawing. If two mountains are 11 inches apart, how far are there apart in real life?

f. John measured a football court and did a scale drawing of it. In the drawing, the football court is 52.5 centimeters long. In real life, it is 105 meters long. What scale did he use?

g. The scale drawing of a room is 1 cm: 3 m. If the room is 9 centimeters long, what is the actual length of the room?

h. The scale drawing of a park is 1 inch: 5 yards. In the drawing, the park is 45 inches long. How long is the actual park?

i. In a scale drawing, the length of a house is 9 cm. If the actual length of the house is 36 meters and the scale is 1 cm: v m, find the scale of the drawing.

Solution

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Scale drawings word problems

a. Charles drew the scale of a building and its parking lot. He used the scale 100 inch : 8 feet. In the drawing, the parking lot is 500 inches long. What is the length of the actual parking lot.

Write the scale of the drawing as a fraction.
100 inch(in) is to 8 feet (ft) = 100in/8ft.
Use proportional releationship to solve this problem.
If 100in is to 8ft,
Then 500in is to $\frac{500\text{in} \times 8\text{ft}}{100\text{ in}}$ = 40ft

Therefore, the actual parking lot is 40ft.

b. Therefore, the length of the road in the drawing is 20 inches.

c. Therefore, the length of the bridge in real life is 500 miles.

d. The scale of the drawing is 1 inch : 3 feet.

e. So, the two mountains are 264 kilometers apart in real life.

f. He used a scale of 1 centimeter: 2 meters.

g. So, the actual length of the room is 27 meters.

h. So, the actual length of the park is 225 yards.

i. So, the scale of the drawing is 1 cm: 4 m.