

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?



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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) =  $100\text{in}/8\text{ft}$

use proportional relationship to solve this problem

if 100in is to 8ft

then 500in is to  $\frac{500\text{in} \times 8\text{ft}}{100\text{in}} = 40\text{ft}$

Therefore, the actual parking lot is 40ft.

- 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?

write the scale of the drawing as a fraction.

1 inch(in) is to 30 miles(mi) =  $1\text{in}/30\text{mi}$

use proportional relationship to solve this problem

if 1in is to 30mi

then 600mi is to  $\frac{600\text{mi} \times 1\text{in}}{30\text{mi}} = 20\text{in}$

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

- 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?

write the scale of the drawing as a fraction.

1 inch(in) is to 25 miles =  $1\text{in}/25\text{mi}$

use proportional relationship to solve this problem

if 1in is to 25mi

then 20mi is to  $\frac{25\text{mi} \times 20\text{in}}{1\text{in}} = 500\text{ miles}$

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

