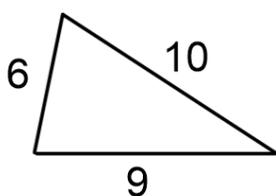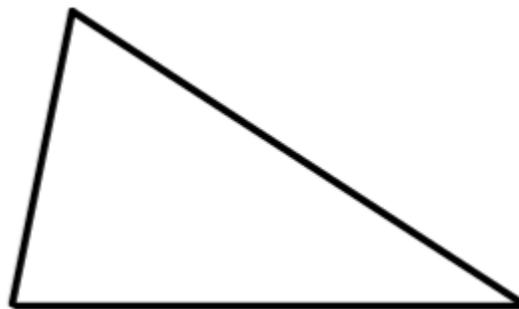# 13.2 Scale Drawings

MATH 7

Write your questions here!
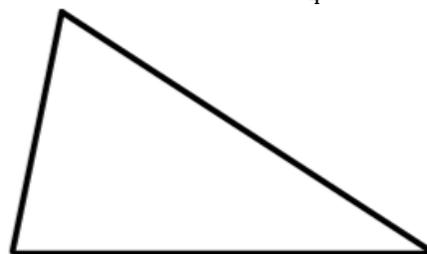
Original Triangle

6   10

9

Scale Factor = 2

Scale Factor = $\frac{1}{3}$

Scale Factor = $\frac{7}{4}$

MODELS

Below is a replica of 1/18 scale 1958 Chevrolet Corvette diecast model. Diecast model car 1:18. If the real convertible is 63 inches wide, how wide is the model?
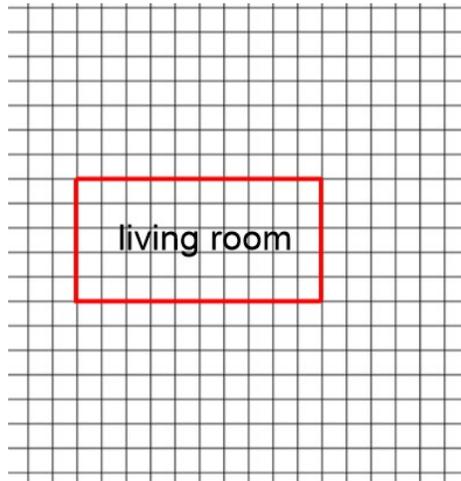
MAPS

If it is 2.5 cm on the map from Beijing to Shanghai, how far is that in real life?
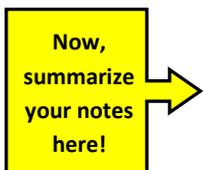
1.5 cm = 400 km

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DRAWINGS

1 unit = 5 feet

What are the dimensions of the real living room?

living room

Add a room off the living room that is 15' by 18.5'.

SUMMARY:

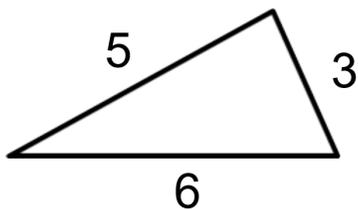Now, summarize your notes here!

13.2 Scale Drawings

Label the sides of the similar figures with the given scale factor.
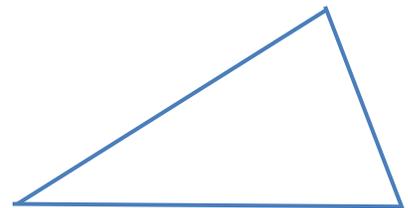
1.
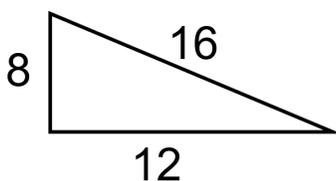
Original Triangle

5   3
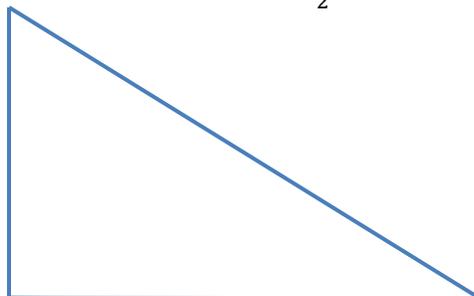
6

Scale Factor $= \frac{3}{4}$

Scale Factor $= \frac{3}{2}$

2.

Original Triangle

8   16

12

Scale Factor $= \frac{5}{2}$
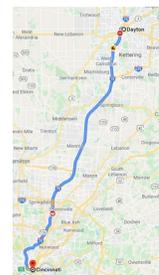
Scale Factor $= \frac{1}{4}$

Use proportions to solve the following.

3. Hot Wheels are designed to be 1:64 of the real automobile. Mr. Brust wants to make a Hot Wheel made of his Toyota Sienna Minivan. If the width of Mr. Brust's minivan is 200 cm. How wide would his minivan Hot Wheel be?
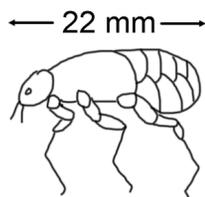

4. An architect makes a model of house with a pool. 1.5 cm of the model is equal to 3 meters in real life. If the model pool is 3.2 cm long, how long is the real pool?

5. Mr. Brust wants to drive from Dayton to Cincinnati. The map has a scale of 2 cm = 15 miles. If Mr. Brust measure the distance between the two cities as 7 cm. How far apart are the cities?
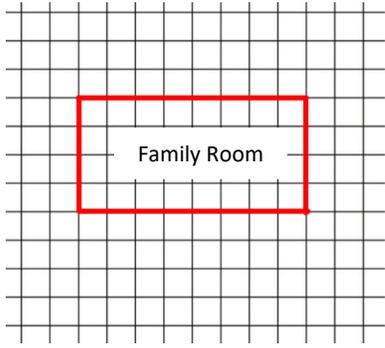

6. The scale of a map is ½ inch equals 28 miles. If two cities are 460 miles away in real life, how far apart will they be drawn on the map?
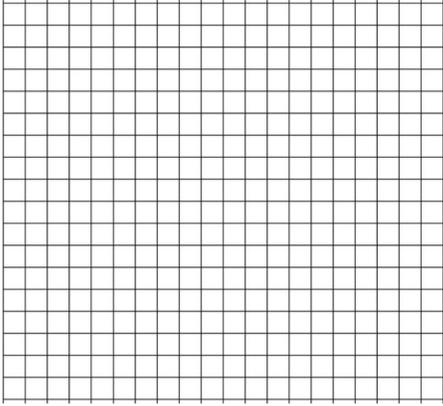
7. Mr. Brust drew the picture of a flea below. The ratio of drawing to real flea is 80:1. How long is a real flea?

←— 22 mm —→

8. The scale is 2 units = 15 feet. What are the real-life dimensions of the family room?

9. The scale is 1 unit = 7 feet. Draw a scaled version of a 42 foot by 24.5 foot rectangular kitchen.

10. Amazon is selling a model of the F/A-18 Hornet series fighter aircraft. The description is shown next to the model.

Model Description:

Skill Level: 2
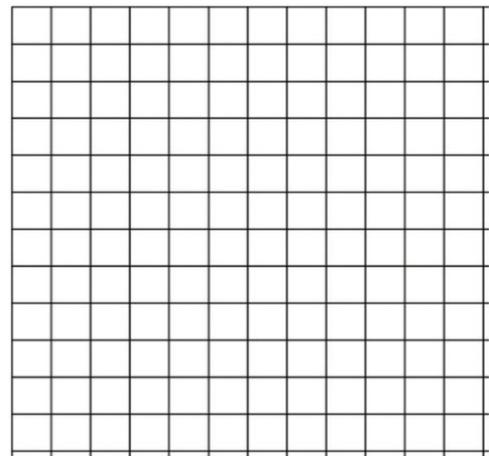
Scale: 1/48
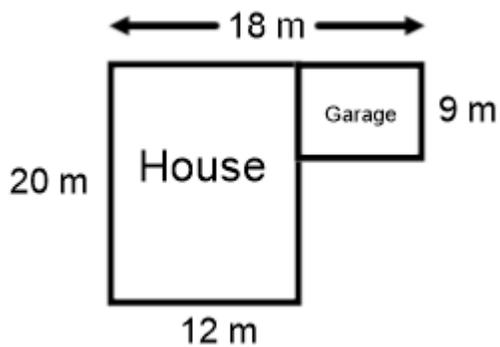
Length: 15"

Wingspan: 11"

Parts: 110+

a. What is the length of a real Hornet fighter aircraft? SHOW WORK!

b. What is the wingspan of a real Hornet fighter aircraft? SHOW WORK!

Use proportions to solve the following.

1. A GI Joe figure is 2:45 of the real person. If the figure is 8.25 cm, how tall is the real person?

2. The key on a map says that 3 cm = 120 km. How far on the map would 1500 km be?

3. Make a scale drawing of the following. Include your scale factor!

EXIT TICKET –

Mr. Sullivan wants to make a mural on the wall of his face. He plans to enlarge his face by a factor of $8\frac{1}{2}$. Is the wall below big enough for his head? Justify your solution.