

Apprenticeship Math 12
ASSIGNMENT: Scale Drawings

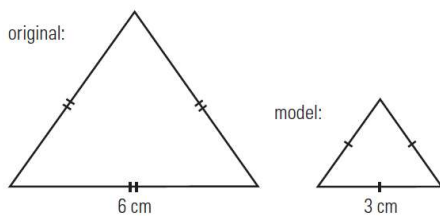
Name: _____

Date: _____

1. The ratio of Tom's age to Mary's is 3:4. If Tom is 15, how old is Mary?

2. If Georgina travels 355 km in 7 hours, how far will she travel in 8.5 hours at the same rate (round to the nearest kilometre)?

3.



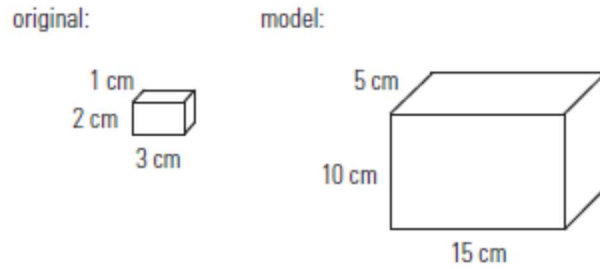
a) Write a scale statement for the above picture.

b) Calculate the scale factor used to create the model and state if it is an enlargement or reduction.

scale factor = _____

enlargement or reduction? _____

4.



a) Write a scale statement for the above picture. _____

b) Calculate the scale factor used to create the model and state if it is an enlargement or reduction.

scale factor = _____

enlargement or reduction? _____

5. A photograph of a strand of human hair shows the hair magnified by a factor of 200.

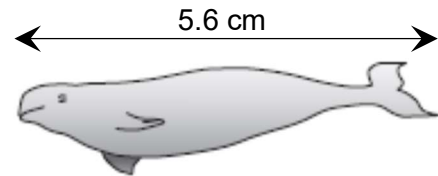
a) Write a scale statement for the photograph. _____

b) If the photograph shows the hair as 2 cm wide, what is the actual width of the hair?

6. Nils Högländer, a player for the Vancouver Canucks, is 1.75 m tall. On a hockey card, he is 5 cm tall. Write a scale statement for the hockey card?

7. In a picture, a man measures 2.3 cm. His actual height is 1.78 m. He is standing beside a flagpole that measures 7.6 cm in the picture. What is the actual height of the flagpole, to the nearest tenth of a metre?

8. A beluga whale that is actually 4.2 m long is represented in a children's picture book as shown.



- a) Based on the measurement given, write a scale statement for the picture.

- b) An alligator is drawn at the same scale. In the drawing, it is 5.9 cm long. How long is the actual alligator? Round your answer to the nearest tenth.

- c) How tall will an ostrich be in the picture if it is actually 1.9 m tall? Round your answer to the nearest tenth.

9. The scale used in a drawing is 12.5:1.

a) To the nearest millimeter, what is the actual size of a mite that is drawn as 3.8 cm long?

b) A cat is about 30 cm tall. How tall would it be drawn using this scale?

c) Do you think it is useful to use the same scale to draw both the mite and the cat? Explain why or why not.

1. 20 years
2. 431 km
3. a) 1:2 b) $\frac{1}{2}$ or 0.5, reduction
4. a) 5:1 b) 5, enlargement
5. a) 200:1 b) 0.01 cm or 0.1 mm
6. 1:35
7. 5.9 m
8. a) 1:75 b) 4.4 m c) 2.5 cm
9. a) 3 mm b) 375 cm or 3.75 m