Apprenticeship Math 12
TEST PREP: Scale

Name: _____

Date: _____

scale statement	scale factor	
$model : original$	$S.F. = \frac{model}{original}$ $model = original \times S.F.$	1 km = 1000 m 1 m = 100 cm

Show your work!

1. A model of a Boing 747 passenger jet is made on a scale of 1:72.

   a) What scale factor was used to create the model? _____

   b) If the model has a wingspan of 89.4 cm, what is the wingspan of the actual plane in metres? Round your answer to the nearest tenth. _____

2. On a map of the Prince George area, the distance between West Lake and the Husky Oil Refinery is 12.5 cm. The actual distance between the two locations is 25 km.

   a) What is the scale statement on the map? _____

   b) The straight-line distance between Mr. Galloway's house in Beaverly and the Aspen Grove Golf Course is 17.9 km. In centimetres, how far apart are these two locations on the map? Round your answer to the nearest tenth. _____

3.   The scale statement for a blueprint of an office is 1:18. If the actual office is going to be 3.5 m wide, how wide is the office drawin on the blueprint? Round your answer to the nearest tenth.

_____

4.   In a photograph, Lisa and her dog are standing next to a statue. In the photograph, Lisa is 3.9 cm tall and the statue is 6.1 cm tall.

   a) If Lisa is 147 cm tall in real life, how tall is the statue (to the nearest centimeter)?

_____

   b) In real life, Lisa's dog stands 65 cm tall. How tall is the dog in the photograph? Round your answer to the nearest tenth.

_____

5.   Charlotte has built a scale model of the cabin she plans to build on her lake-front property. The actual cabin will be 4.5 m wide by 8.6 m long. The model is 15 cm wide.

   a) What is the scale statement for the model?

_____

   b) How long is the model of the cabin? Round your answer to the nearest tenth.

_____

6.   The Eiffel Tower measures 324 m from base to antenna. If an Eiffel Tower key
      chain measures 8.1 cm tall, what scale factor was used to produce the key chain?

      _____

7.   A storage locker in an apartment building measures 4.81 m deep. A scale model of
      the building layout contains a storage locker measuring 3.7 cm deep. Write a scale
      statement for the model locker in the form $1:x$.

      _____

8.   A design display for a commercial bowling lane contains a 9-cm wide, 156.78-cm
      long scale diagram of the lane. If a regulation bowling lane is actually 105 cm wide,
      how long is the lane in metres? Round your answer to the nearest hundredth.

      _____

1. a) 1/72   b) 64.4 m
2. a) 1:200000   b) 9.0 cm
3. 19.4 cm
4. a) 230 cm   b) 1.7 cm
5. a) 1:30   b) 28.7 cm
6. 1/4000 or 0.00025
7. 1:130
8. 18.29 m