Name: _____   Date: _____

Proportions and Scale Factors

1. Calculate the missing value in each proportion. (use algebra!)

a) $\dfrac{1}{8} = \dfrac{\boxed{}}{624}$

b) $\dfrac{1}{50} = \dfrac{25.2}{\boxed{}}$
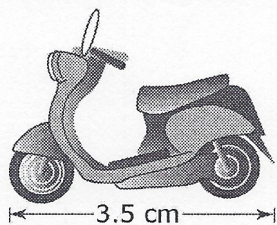
c) $\dfrac{1}{0.6} = \dfrac{58}{\boxed{}}$

d) $\dfrac{1}{\boxed{}} = \dfrac{15.3}{1224}$

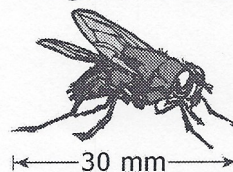e) $\dfrac{1}{75} = \dfrac{\boxed{}}{6450}$

f) $\dfrac{1}{\boxed{}} = \dfrac{5.6}{1.68}$

2. Calculate the actual length of each object.

a) The scale for the image of the scooter is 1 : 20.

|◄————3.5 cm————►|

b) The scale for the enlarged image of a housefly is 1 : 0.3.

|◄————30 mm————►|

3. Determine the scale factor. (always smaller term on top!)

a) $\boxed{} = \dfrac{53}{106}$ b) $\boxed{} = \dfrac{0.9}{15}$ c) $\boxed{} = \dfrac{17}{850}$

d) $\boxed{} = \dfrac{6.2}{24.8}$ e) $\boxed{} = \dfrac{18}{24}$ f) $\boxed{} = \dfrac{30}{37.5}$

4. An actual laptop has a width of 39.5 cm.
Calculate the scale factor used in the image
of the laptop. Express the answer to the nearest tenth.

|←——— 4.2 cm ———→|
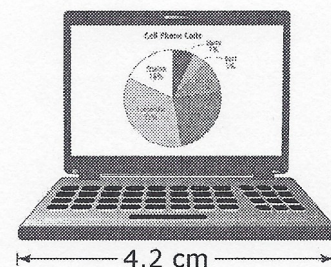
5. A driving distance is 650 km. The distance shown on a map is 4 cm.
   a) Express the map scale in words.
   b) What is the scale factor? Express the answer to the nearest tenth.