Name: _____ Date: _____

BLM 1–2

Chapter 1 Prerequisite Skills

1. Fill in the blanks.

a) There are _____ centimetres in 1 m.

b) There are _____ millimetres in 1 m.

c) There are _____ millimetres in 3.5 m.

d) There are _____ centimetres in 1 km.

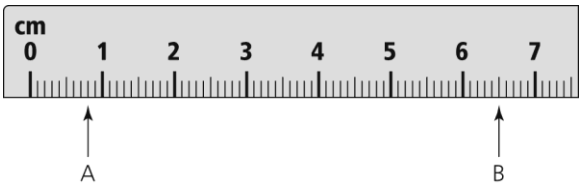
2. Estimate the total length of the line segment(s) connecting S and T. Then, measure to determine how close your estimates are to the actual measurements. Give your answers in centimetres.

a) S T

b) S T

c) S T

3. The diagram shows an SI ruler.



a) What is the length measured at A?

b) What is the distance from A to B?

c) What is the smallest unit you can read on this ruler?

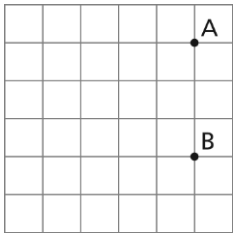
4. Mark the position of each letter on the ruler.

a) L = 1.7 cm **b)** M = 2.5 cm

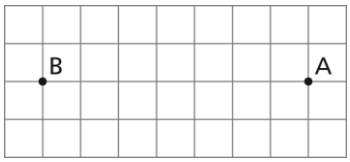
c) N = 32.5 mm **d)** P = 55 mm

5. Suppose each diagram is drawn on centimetre grid paper. What is the shortest distance from A to B?

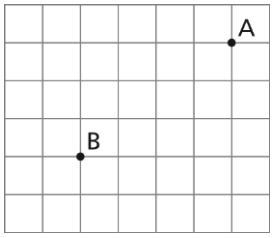
a)



b)



c)



6. a) Describe the meaning of *scale factor*. Use an example.

b) Suppose the scale factor for a diagram of a digital camera is less than 1. Describe what you know about the diagram.

c) The diameter of a Canadian toonie is 28.03 mm. What scale was used to create the image shown? Express your answer in lowest terms, to the nearest hundredth.

Name: _____ Date: _____

BLM 1–2
(continued)

7. What is the lowest common denominator for each set of fractions?

a) $\frac{1}{2}, \frac{3}{8}$

b) $\frac{5}{16}, \frac{1}{4}, \frac{3}{2}$

c) $\frac{5}{8}, \frac{3}{4}$

d) $\frac{1}{4}, \frac{5}{32}, \frac{7}{8}$

8. Simplify. Express your answer as a fraction and as a decimal.

$\frac{1}{2} - \frac{3}{4} + \frac{7}{8}$

9. Solve each proportion for x. Explain how you determined your answer in part b).

a) $\frac{x}{8} = \frac{5}{4}$

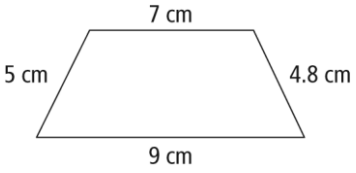
b) $\frac{3}{x} = \frac{2}{5}$

c) $\frac{2.5}{6} = \frac{x}{3}$

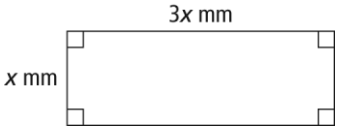
d) $\frac{4}{9} = \frac{10}{x}$

10. What is the perimeter of each figure? Give each distance to the nearest hundredth of a unit, if necessary.

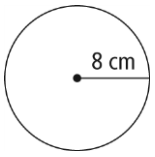
a)



b)



c)



11. For each figure described, draw a labelled diagram to help you calculate the unknown distance. Express your answer to the nearest tenth of a metre.

a) Rectangle: perimeter = 16 cm

length of one side = 5 cm

length of other side = ☐

b) Isosceles triangle: perimeter = 18.4 mm

length of equal sides = 5.6 mm

length of third side = ☐

c) Circle: circumference = 18 m

diameter = ☐