Review: Chapter 3 – Length, Area, and Volume

1. Perform the conversions from one unit to the other.
    a. 62 inches into **feet and inches**
    b. 45 inches into **feet**
    c. 81 feet into **yards**
    d. 210 mL into **fluid ounces**
    e. 165 mL into **tablespoons**
    f. 1.4 gallons into **pints**

2. On a recent business trip, James used his private vehicle to travel from Regina to Saskatoon, and then from Saskatoon to Calgary, AB and back to Regina. The distance from Regina to Saskatoon is 263 kilometres. The distance from Saskatoon to Calgary, AB is 603 km, and the distance from Calgary to Regina is 758 km.
    a. If James's odometer reads 42 550 km when he reaches Calgary, what did his odometer read before leaving Regina?

    b. James's company reimburses him $0.42 per km for travel when he uses his own vehicle. How much will James's company reimburse him for this trip?

3. A large storage bin is a rectangular prism that measures 4.5 m long, 2.5 m deep, and 0.8 m high.
    a. Calculate the surface area of the storage bin in square metres.

    b. Calculate the volume of the storage bin in cubic metres.

4. Hazel has purchased a bulk order of 10,000 cm^3 of cat treats. She is repackaging the cat treats into small boxes that are 12 cm by 12 cm by 18 cm. How many of these boxes will she need to repackage all of the cat treats?

5. How many 20 cm by 20 cm tiles would be needed in order to tile a room that is 3.0 metres by 4.5 metres?

Answer Key:

1. a) 5' 2"   b) 3.75 ft   c) 27 yd
   d) 7 fl oz   e) 11.2 pints

2. a) 41,684 km   b) $682.08

3. a) 33.7 m^2 b) 9 m^3

4. 4 boxes

5. 338 tiles

Review: Chapter 4 – Mass, Temperature, Volume

1. Perform the conversions from one unit to the other.
    a. 26.5 grams into *milligrams*
    b. 6 kg into *pounds*
    c. 2.8 pounds into *ounces*
    d. 7500 kg into *tonnes*
    e. 9 ounces into *grams*
    f. 1.25 kg into *ounces*

2. Which temperature is actually colder?
   16°F or -7°C

3. The load limit on a crane is 1.8 tons. Would it be safe to lift a load of 40 boxes of tiles that each weigh 42 kg?

4. Which option is a better buy?
   350 grams of ham for $5.70, or 1 kg of ham for $16.50

5. If one litre of water weighs approximately 2 pounds 3 ounces, how much would 6 litres of water weigh? State your answers in *pounds and ounces*.

Answer Key:

1. a) 26,500 mg   b) 13.2 lb   c) 44.8 oz
   d) 7.5 t   e) 44 oz

2. 16°F = -9°C, so 16°F is colder than -7°C

3. The load limit is 3600 lb. The load is 3696 lb so it is not safe.

4. 350 g for $5.70 is $16.29/kg which is cheaper than $16.50/kg

5. 13 lb 2 oz

Review: Chapter 5 – Angles and Parallel Lines

1.   Fill in the missing parts of the table. If a particular angle doesn't exist, state "***does not exist***" in the box:

Angle	Complement	Supplement	Resulting angle measure after the angle is bisected
20°			
		30°	
			70°
	34°		

2.   Identify each of the following pairs of angles in the given diagram:
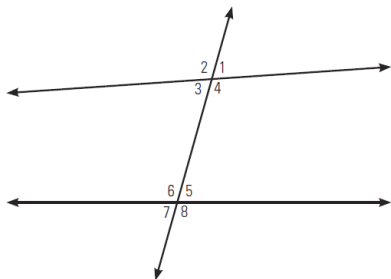
Choose from:
o vertically opposite angles
o corresponding angles
o a linear pair
o alternate interior angles
o alternate exterior angles
o interior angles on the same side of the transversal

a) Angle 1 and Angle 2
b) Angle 3 and Angle 5
c) Angle 7 and Angle 1
d) Angle 4 and Angle 8
e) Angle 6 and Angle 3
f) Angle 4 and Angle 2

3.   Line 1 and Line 2 are parallel.
      What are the measures of the angles numbered 1 to 4?
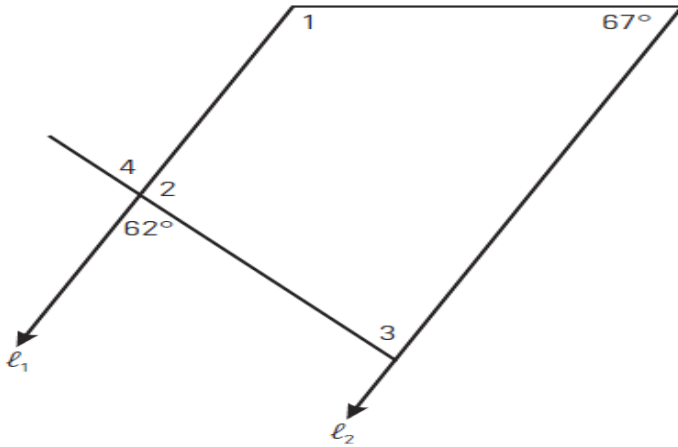
Angle 1 = _____

Angle 2 = _____

Angle 3 = _____

Angle 4 = _____

4.   What is the measure of the third angle in a triangle that has angles measuring
      101° and 39°?

Answer Key:

1.

| Angle	Complement	Supplement	Resulting angle measure after the angle is bisected
20°	**70°**	**160°**	**10°**
150°	**n/a**	30°	**75°**
140°	**n/a**	**40°**	70°
56°	34°	**124°**	**28°**

2.   a) a linear pair

b) alternate interior

c) alternate exterior

d) corresponding

e) interior angles on the same side of the transversal

f) vertically opposite angles

3.   Angle 1 = 113°   Angle 2 = 118°   Angle 3 = 62°   Angle 4 = 62°

4.   40°

Review: Chapter 6 – Similarity of Figures

1. On a blueprint, 1 cm represents 5 feet. If a room has dimensions of 4.2 cm by 1.8 cm, what are the dimensions of the actual room?

2. If triangle PQR is similar to triangle GHI, list the corresponding angles and sides.

3. The following polygon PQRS is similar to polygon LMNO. Calculate the lengths of the missing sides x and z and determine the measures of the missing angles w and y.
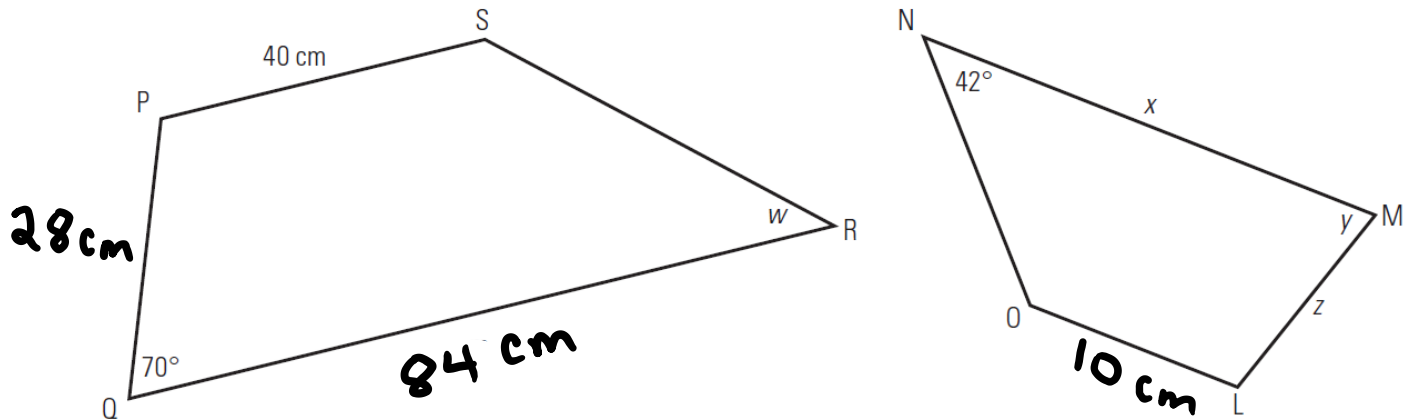
4. If a house is 45 feet long, 36 feet wide, and the top of the roof is 30 feet above ground level, what will the corresponding dimensions be of a model built so that 1 foot is represented by 2 cm in the model?

5. Triangle ABC is similar to triangle XYZ. Calculate the length of x to one decimal place.
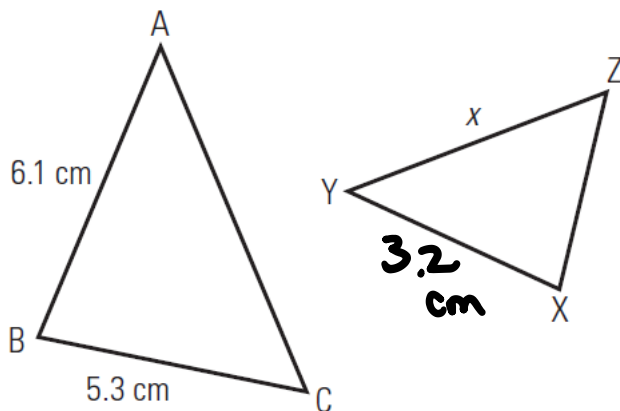
Answer Key:

1. 21 feet by 9 feet

2. $\angle P = \angle G, \angle Q = \angle H, \angle R = \angle I$ $\dfrac{PQ}{GH} = \dfrac{QR}{HI} = \dfrac{RP}{IG}$

3. w = 42°   x = 21 cm   y = 70°   z = 7 cm

4. The model will be 90 cm long, 72 cm wide, and 60 cm tall.

5. 2.8 cm