Math at Work 10
Chapter 3 Area Review
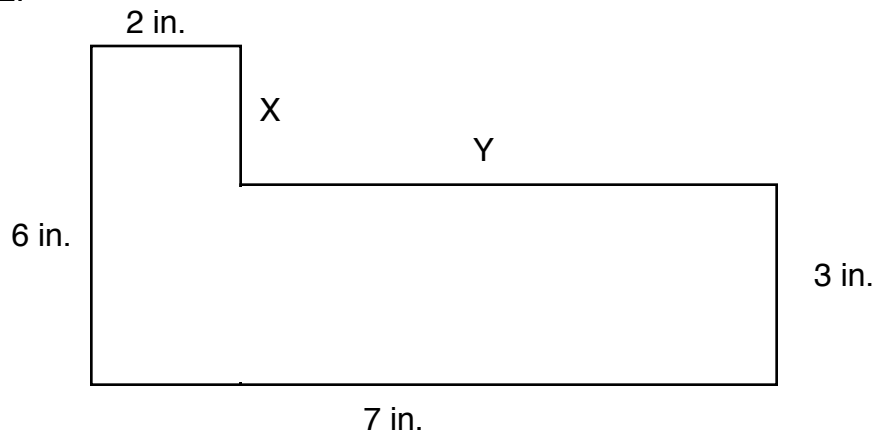
Question Set #1 (Get Ready)

1. Round each length to the indicated unit.

a) 28.35 m to the nearest 0.1 m

b) 24 3/4 in. to the nearest inch

c) 2 m 55 cm to the nearest metre

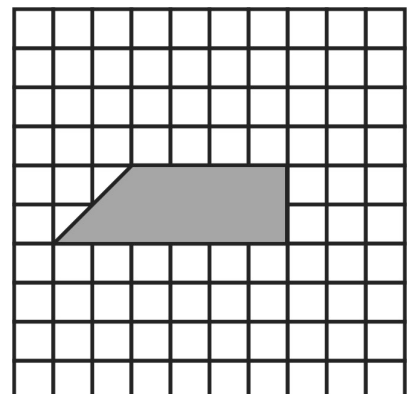d) 6.7 km to the nearest km

2.

2 in.

X

Y

6 in.

3 in.

7 in.

a) Find the missing dimensions.

b) Find the perimeter.

c) Find the area.

3. Use the diagram on the right to answer the following
   questions. Each square represents 1 cm^2

a) How many squares are filled in?

b) What is the area in square cm?

c) What is the area in square m?

Question Set #1 Answers.

Team: _____

1)

a)   28.4 m

b)   25 in.

c)   3 m

d) 7 km

2)

a) X: 3 in.
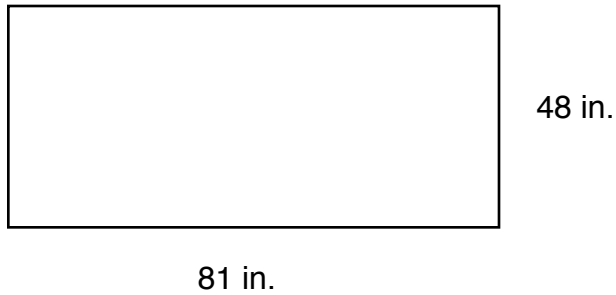   Y: 5 in.

b)   26 in.

c)   27 square inches
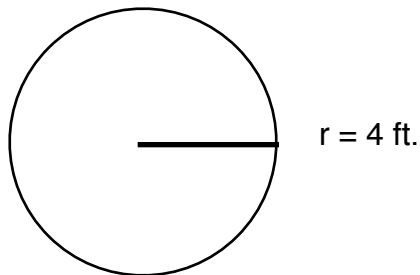
3)

a)   10

b)   10 square cm

c)   0.0010 square m

Question Set #2 (Imperial Area Measurements - 3.1)

1.

48 in.

81 in.

a) Calculate the area of the rectangle in square inches.

b) Convert the area to square feet.

c) Convert the area to square yards.

2.

r = 4 ft.

a) Calculate the area of the circle in square feet.

b) Convert the area to square inches.

c) Convert the area to square yards.

3. Complete each of the following conversions.

a) $2\,ft^2 = $ _____ in^2

b) $9\,ft^2 = $ _____ yd^2

c) $\dfrac{1}{2}\,ft^2 = $ _____ in^2

d) $1296\,in^2 = $ _____ yd^2

Question Set #2 Answers.

Team: _____

1)

a)   3888 square inches
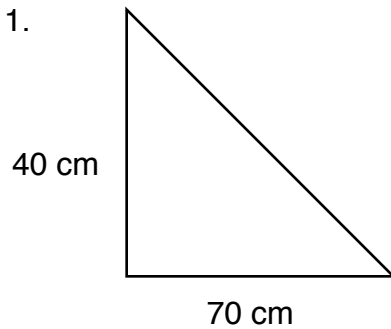
b)   27 square feet

c)   3 square yards

2)

a)   50.3 square feet

b)   7238.2 square inches

c)   5.6 square yards

3)

a)   288 square inches

b)   1 square yard

c)   72 square inches

d)   1 square yard
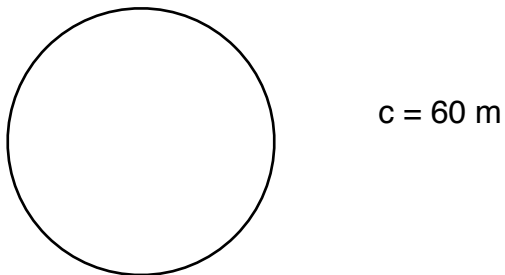
Question Set #3 (SI Area Measurements - 3.2)

1.

40 cm

70 cm

a) Calculate the area of the triangle in square cm.

b) Convert the area to square m.

c) Convert the area to square km.

2.

c = 60 m

a) Calculate the diameter of the circle.

b) Calculate the area in square metres.

c) Calculate the area in square centimetres.

3. What SI unit would be best to express the area of each item?

a) a parking space

b) the palm of your hand

c) the province of Nova Scotia

d) your fingernail

Question Set #3 Answers.

Team: _____

1)

a)   1400 square cm

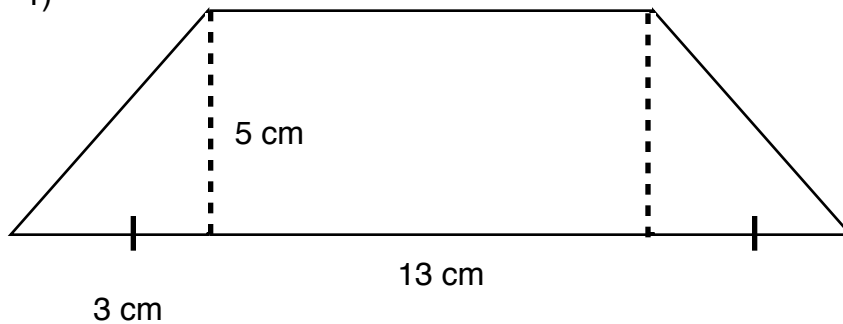b)   0.14 square m

c)   0.00000014 square km

2)

a)   19.1 m

b)   286.5 square m

c)   2865000 square cm

3)

a)   square m

b)   square cm

c)   square km

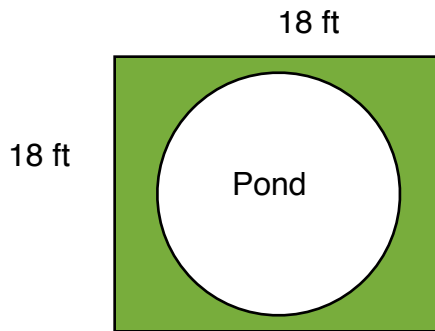d)   square mm

Question Set #4 (Working with Area - 3.3)

1)

5 cm

13 cm

3 cm

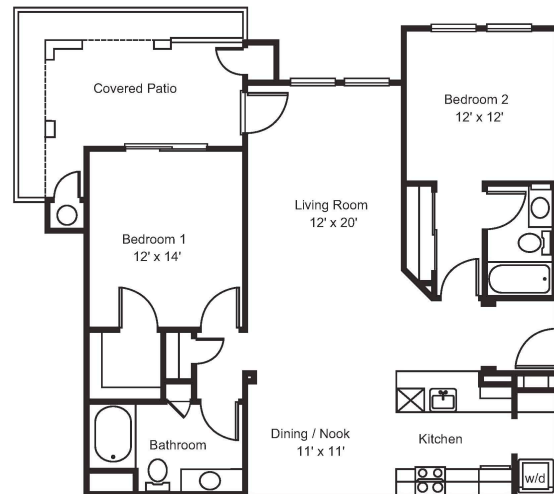a) Calculate the total area.

2)

18 ft

18 ft

Pond

a) If the diameter of a small pond is 10 ft. Calculate the area of the pond in square feet.

b) Calculate the area of the grass around the pond.

3)

a) Calculate the total area of the two bedrooms.

b) You are in the process of painting Bedroom #2. You have already painted the wall that includes the doorway. This leaves the remaining 3 walls. One wall has 2 (2 ft. by 2ft. windows) The height of the room is 8 ft. How much area do you have left to paint?

Covered Patio

Bedroom 2
12' x 12'

Living Room
12' x 20'

Bedroom 1
12' x 14'

Bathroom

Dining / Nook
11' x 11'

Kitchen

w/d

2 Bedroom 2 Bathroom   (1,156 sq. ft.)

Question Set #4 Answers.

Team: _____

1)

a)   80 square cm

2)

a)   78.5 square feet

b) 245.5 square feet

3)

a) 312 square feet
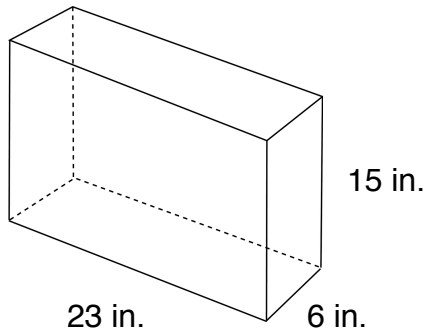
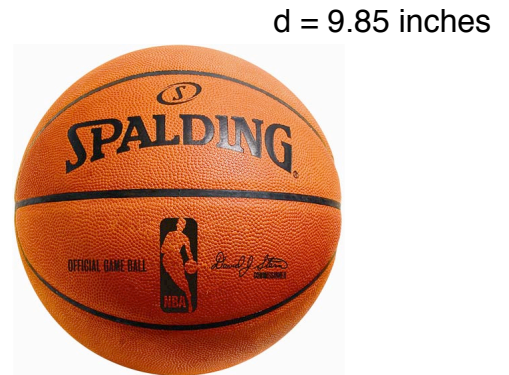b) 280 square feet

Question Set #5 (Surface Area of 3D Objects - 3.4)

1. Calculate the total surface area of the following 3D objects.

a)

15 in.

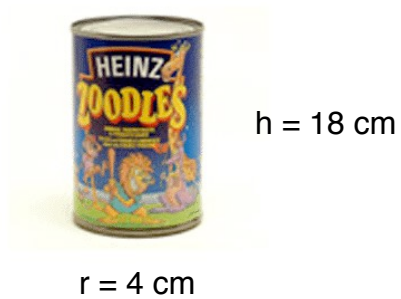23 in.   6 in.

b)

d = 9.85 inches

c)

h = 18 cm

r = 4 cm

2. Mr. Barnes's favorite ice cream is Coffee.

d = 5 cm

a) Calculate the surface area of the following cone.
    (remember ice cream cones do not have a top)

b) If cones cost 5 cents per square centimetre, how much would this cone cost? Does this seem realistic?

s = 15 cm

Question Set #5 Answers.

Team: _____

1)

a)   1146 square inches

b)   304.8 square inches

c) 552.9 square cm

2)

a) 117.8 square cm

b) $5.89 (or 589 cents) No, this is not reasonable as it costs more than the ice cream and cone are sold for.