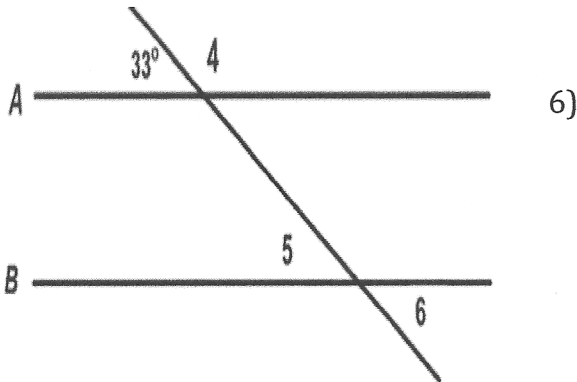


# Unit 4 Take Home and Check

**A = Basic    B = Moderate    C = Challenging**

**A**



- 1) What is the measure of angle 5? Why?
- 2) What is the measure of angle 6? Why?
- 3) What is the measure of angle 4? Why?

**A**

**True or False?? If false explain why.**

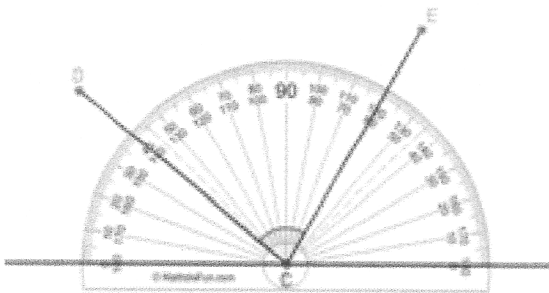
- 4) A regular hexagon always has six congruent sides.
- 5) The angles of a triangle sum to  $180^\circ$ .

**A**

- 6) A triangle with angles  $110^\circ$ ,  $30^\circ$ , and  $40^\circ$  is isosceles.
- 7) A triangle with sides 30, 40, and 50 ft. is 12) Find scalene.
- 8) A rhombus is a type of square.
- 9) A parallelogram has four sides and four congruent sides.
- 10) The area of a parallelogram with base of 10 feet and height of 2 ft. is 20 square feet.  
w is.
- 11) The base of a triangle with area of 36 square cm and height of 4 cm is 16 cm.

**A**

- 12) What is the measure of the angle below?



Show the measure of angle DCE.

**A**

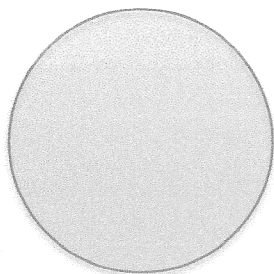
13) Find the circumference of a circle with a radius of 5.inches.

**A**

14) Find the area of a circle with a diameter of 6 feet.

**B**

Below is an illustration of a round flower garden. Use the illustration of the garden circle to solve problems 15 and 16. The area of the flower garden circle is 2,640 feet squared. Show all of your work.



15) What is the diameter of the garden?

16) What is the circumference of the garden circle?  
Use your answer from #12 if needed)

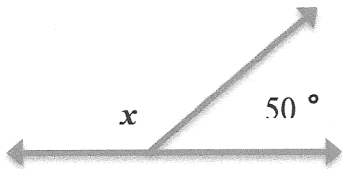
**B**

17) A swimming pool is 8 m long, 6 m wide and 1.5 meters deep. The water resistant paint needed for the pool costs \$6 per square meter.

- a. How much will it cost to paint the interior surfaces of the pool?
- b. How many liters of water will be needed to fill it?

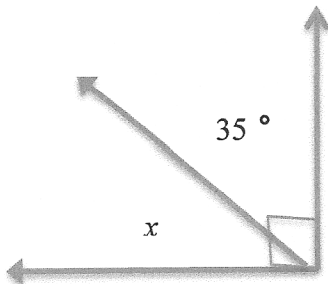
**A**

18) Give the measurement of angle measurement of angle  $x$ . Explain how you got it. (no protractor!)



**A**

19) Give the measurement of angle  $x$ . Explain how you got it. (no protractor!)



A

Label each solid below:

20) \_\_\_\_\_



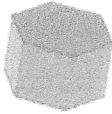
21) \_\_\_\_\_



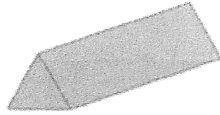
22) \_\_\_\_\_



23) \_\_\_\_\_



24) \_\_\_\_\_



25) \_\_\_\_\_



26) \_\_\_\_\_



27) \_\_\_\_\_



28) \_\_\_\_\_



29) \_\_\_\_\_



A

30) How many faces, edges, and vertices does ~~the~~ rectangular prism have?

**A**

31) How many faces, edges, vertices does #22 have?

**A**

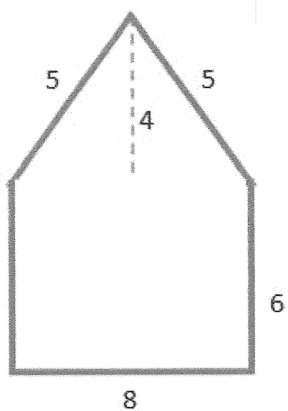
32) Describe the vertical cross section of #21.

**A**

33) Describe the horizontal cross of section of #24.

**C**

34) Find the area of the following composite figure.



**B**

35) A square has an area of  $225 \text{ cm}^2$  what is the perimeter?

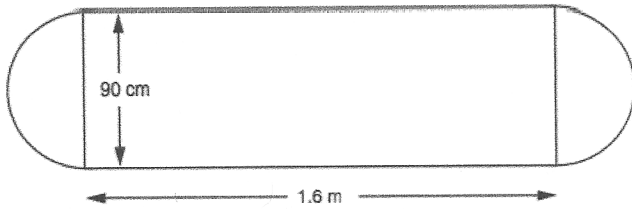
**A**

36) A rectangular back yard has a length of 90 yd. and an area of  $4500 \text{ yd}^2$ . What is the width?

**B**

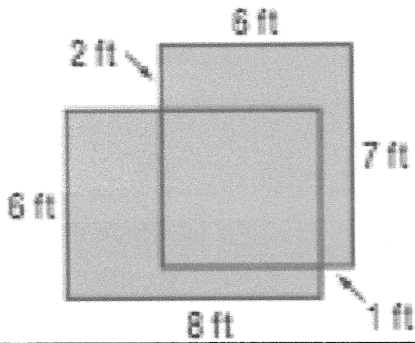
37)

Find the surface area of the shape below, using  $\pi = 3.142$ .



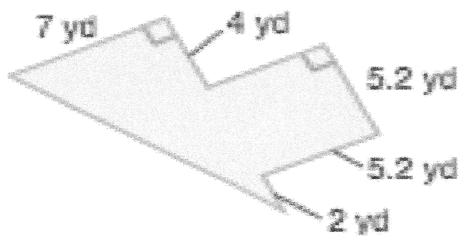
**C**

38) Find the area of the figure below.



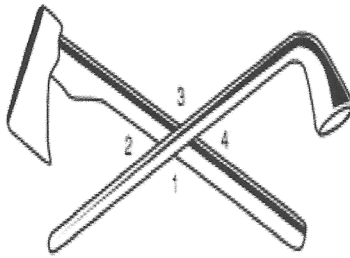
**B**

39) Find the area of the figure below.



**A**

40) Name a pair of vertical angles.



\_\_\_\_\_

\_\_\_\_\_

**A**

41) If  $m\angle A = 56.4^\circ$ :

- a) What is the supplement?
- b) What is the complement?

**A**

42) Will the following side lengths make a triangle?  
Explain why or why not.

- a) 9, 5, 13
- b) 10, 12, 2



**A**

43) Use a protractor and a ruler to construct a triangle with two adjacent sides and an angle of  $55^\circ$  between them.

**A**

44) Draw a parallelogram with an acute angle of  $40^\circ$ .

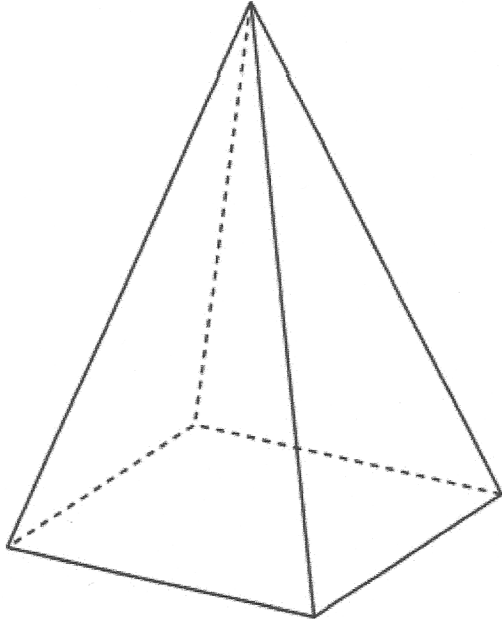
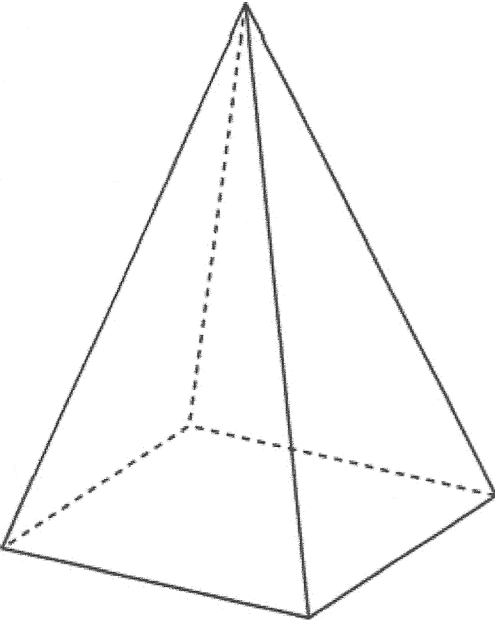
**B**

45) What is the range of side lengths that could make the 3<sup>rd</sup> side of a triangle given the sides 8 in. and 4 in?

**B**

46) Draw a cross section this pyramid when it is cut by the planes described below. Then tell what shape is produced.

- a) Perpendicular to its base
- b) Parallel to its base



**B**

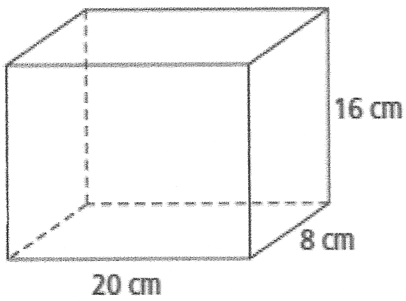
47) What is the base of a parallelogram with an area of 144 inches and height of 16?

**B**

- 48) A building has a roof made up in part by a square pyramid with a base area of 25 square feet and a height of 12 feet. What is the volume of the pyramid?

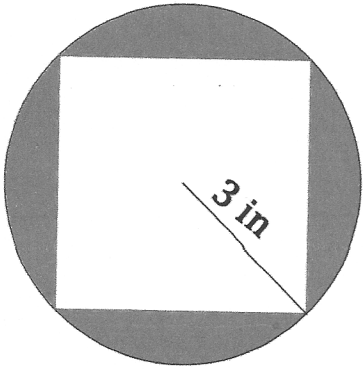
**B**

- 49) Find the surface area and volume of this prism.



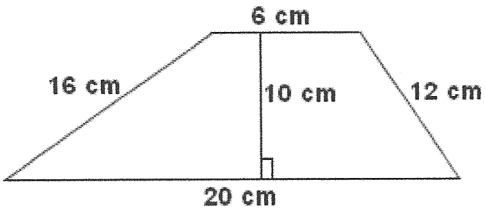
**B**

50) Find the area of the shaded region in the figure below.



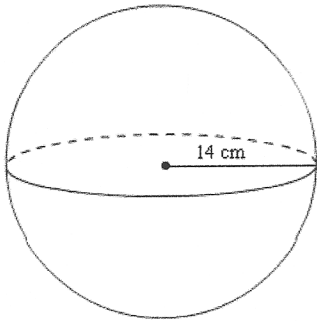
**A**

51) Find the area of the trapezoid below.



**A**

52) Find the surface area of the sphere.

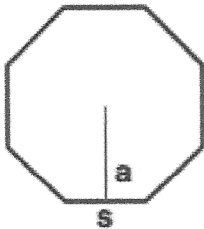


**B**

53) The volume of a cube is  $125 \text{ cm}^3$ . Find the surface area. (Draw a picture to help you find the answer).

**C**

54)



$s = 7.5 \text{ cm}$

$a = 9.053 \text{ cm}$

Area: \_\_\_\_\_

Perimeter: \_\_\_\_\_

Type: \_\_\_\_\_