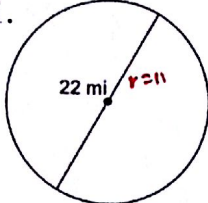
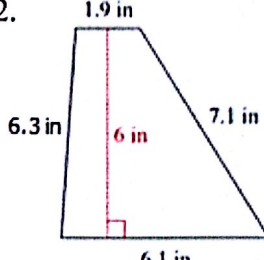
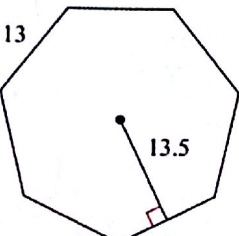


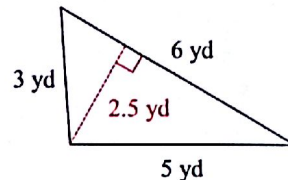
Find the area and perimeter/circumference for each figure below. If necessary, round the hundredth.

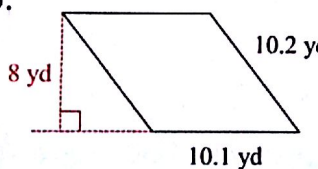
1.   $r = 22 \div 2 = 11$   
 $A = \pi r^2$   
 $A = \pi (11)^2$   
 $A = 121\pi \approx 380.13 \text{ mi}^2$   
 $C = \pi d$   
 $C = 22\pi$   
 $C = 69.08 \text{ mi}$

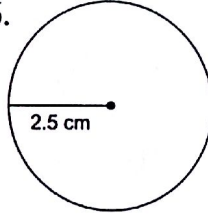
2.   $A = \frac{1}{2}h(b_1 + b_2)$   
 $A = \frac{1}{2}(6)(1.9 + 6.1)$   
 $A = \frac{1}{2}(6)(8) = 24 \text{ in}^2$   
 $P = 1.9 + 7.1 + 6.1 + 6.3$   
 $P = 21.4 \text{ mi}$

3. Regular Polygon

  $A = \frac{1}{2}san$   
 $A = \frac{1}{2}(13)(13.5)(7)$   
 $A = 614.25 \text{ un}^2$   
 $P = 13 \times 7 = 91 \text{ units}$

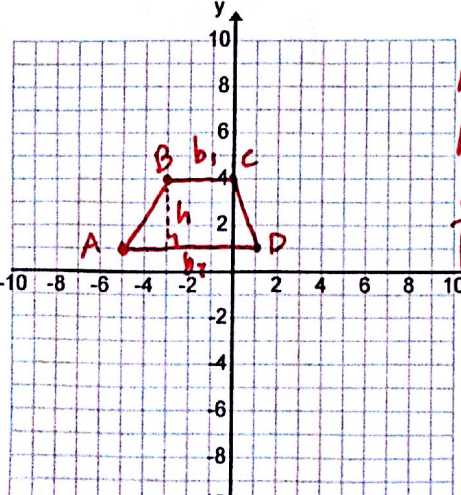
4.   $A = \frac{1}{2}bh$   
 $A = \frac{1}{2}(5)(3)$   
 $A = 7.5 \text{ yd}^2$   
 $P = 3 + 5 + 6 = 14 \text{ yd}$

5.   $A = bh$   
 $A = (10.1)(8) = 80.8 \text{ yd}^2$   
 $P = 2(10.1) + 2(10.2)$   
 $P = 20.2 + 20.4 = 40.6 \text{ yd}$

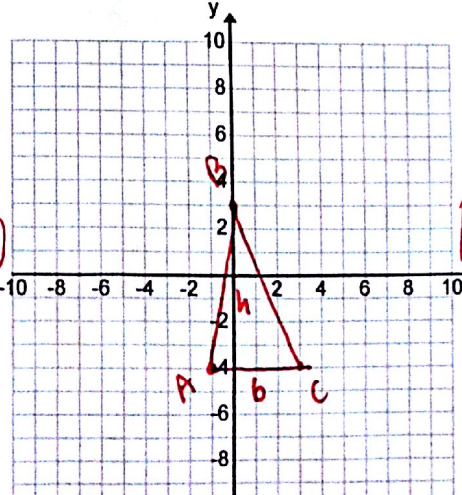
6.   $A = \pi r^2$   
 $A = \pi (2.5)^2$   
 $A = 6.25\pi \approx 19.63 \text{ cm}^2$   
 $C = 2\pi r$   
 $C = 2\pi (2.5)$   
 $C = 5\pi \approx 15.7 \text{ cm}$

Name the type of polygon formed by the sets of points below. Then, find the area of each figure.

7. A(-5, 1), B(-3, 4), C(0, 4), D(1, 1)

  $A = \frac{1}{2}h(b_1 + b_2)$   
 $A = \frac{1}{2}(3)(3 + 6)$   
 $A = \frac{1}{2}(3)(9)$   
 $A = 23.5 \text{ un}^2$

8. A(-1, -4), B(0, 3), C(3, -4)

  $A = \frac{1}{2}bh$   
 $A = \frac{1}{2}(4)(7)$   
 $A = 14 \text{ un}^2$

Use the given information to solve each problem. Show all work used to get you to your answer.

9. If the area of a rectangle is  $125\text{ft}^2$  and the base measures 25 ft., what is the measure of the height?  
 $A = LW$  or  $A = bh$   $b = 25$   $\frac{125}{25} = h$   $h = 5\text{ft}$   
 $A = 125 \rightarrow 125 = 25h$

10. The area of a circle is  $49\pi\text{m}^2$ . What is the EXACT circumference of the circle?

$$A = \pi r^2 \quad 49\pi = \pi r^2 \quad 49 = r^2 \quad C = 2\pi r$$

$$A = 49\pi \quad \sqrt{\pi} \quad \sqrt{\pi} \quad r = 7 \quad C = 2\pi(7) \quad C = 14\pi\text{m}$$

11. If the area of a triangle is  $12\text{in}^2$  and it is 3 in tall, how long is the base of the triangle?

$$A = \frac{1}{2}bh \quad h = 3 \quad 12 = \frac{1}{2}b(3) \quad \frac{24}{3} = \frac{3b}{3} \quad b = 8\text{in}$$

$$A = 12$$

12. The circumference of a circle is  $16\pi\text{m}$ . What is the EXACT area of the circle?

$$C = \pi d \quad d = 16 \quad r = 8 \quad A = \pi r^2 \quad A = \pi(8)^2 \quad A = 64\pi\text{m}^2$$

$$C = 16\pi$$

13. The area of a rhombus with one diagonal measuring 3 feet long is  $36\text{ft}^2$ . What is the length of the other diagonal?

$$A = \frac{1}{2}d_1 \cdot d_2 \quad 36 = \frac{1}{2}(3)d \quad 72 = \frac{3d}{3} \quad d = 24\text{ft}$$

$$A = 36$$

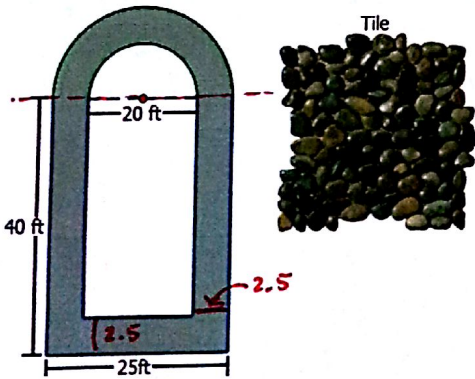
14. The area of a square is  $49\text{cm}^2$ . How long is one side of the square?

$$A = s^2 \quad A = 49 \quad 49 = s^2 \quad \sqrt{49} = \sqrt{s^2} \quad s = 7\text{cm}$$

15. The area of a regular polygon is 928 square centimeters, with a 16 centimeter apothem and sides with the length of 23.2 centimeters. What is the name of the polygon?

$$A = \frac{1}{2}san \quad 928 = \frac{1}{2}(23.2)(16)n \quad 928 = 185.6n \quad n = 5 \quad \text{Pentagon}$$

16. You recently put a in ground pool in the backyard. You are purchasing tile that cost \$6.81 per square foot. What would it cost to tile the shaded area around the pool?



OUTER

$$A = 40 \times 25$$

$$A = 1000$$

$$A = \pi r^2 \div 2$$

$$A = (12.5)^2 \pi \div 2$$

$$A = 245.31$$

$$A_{\text{outer}} = 1000 + 245.31$$

$$= 1245.31\text{ft}^2$$

INNER

$$A = 20 \times 37.5$$

$$A = 750$$

$$A = \pi r^2 \div 2$$

$$A = \pi(10)^2 \div 2$$

$$A = 50\pi$$

$$A = 157$$

$$A_{\text{inner}} = 750 + 157$$

$$= 907\text{ft}^2$$

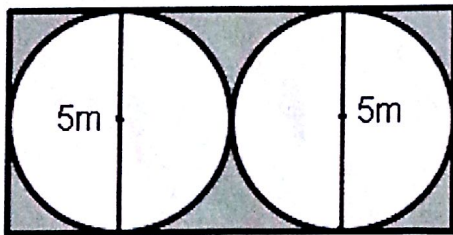
AREA OF SHADED

$$A = 1245.31 - 907$$

$$A = 338.31\text{ft}^2$$

$$\text{COST} = 338.31 \times 6.81 = \$2303.89$$

17. Find the area of the shaded region.



$$A_{\text{RECT}} = 5 \times 10 = 50$$

$$A_{\text{circle}} = \pi r^2 = \pi(2.5)^2 = 19.625$$

$$A_{2\text{circ}} = 19.63 \times 2 = 39.26$$

$$A_{\text{SHADED}} = 50 - 39.26 = 10.74\text{m}^2$$