

Name: KEY

Period: _____

Date: _____

7th Grade Pre-AP Test REVIEW– Circles, Composite Figures & Surface Area

1. Jennifer is painting a picture. Her canvas is 17 inches wide and 13 inches tall. How many square inches is the area of her canvas?

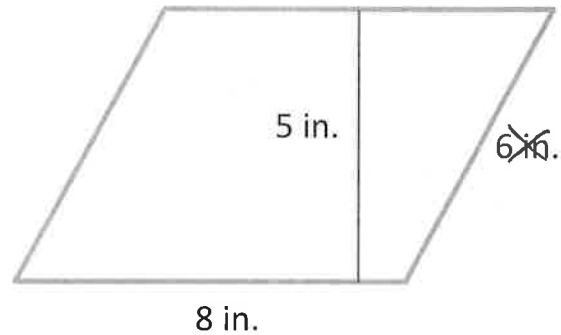


$$A = bh$$
$$A = 17 \cdot 13$$
$$A = 221 \text{ in}^2$$

2. What is the area of the shape below?

$$A = bh$$
$$A = 8 \cdot 5$$

$$A = 40 \text{ in}^2$$



3. Katie wants to put a wood frame *around* picture she just took. If the area of the picture is 24 square inches, how much wood will she need?

$$A = 24$$

$$h = 4$$

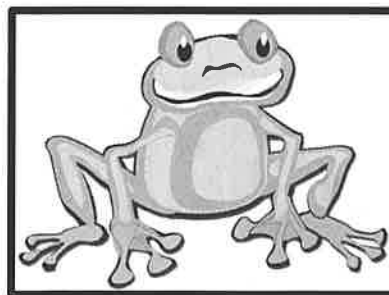
$$b = ?$$

$$A = bh$$

$$24 = 4b$$

$$\frac{24}{4} = \frac{4b}{4}$$

$$b = 6 \text{ in}$$



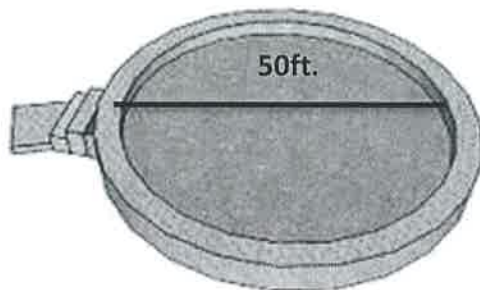
4 in.

4. Kate got a circular swimming pool with a diameter of 50 feet. She wanted to know about how many feet the circumference of her pool is. What is the circumference of the pool?

$$C = \pi d$$

$$C = 3.14 \cdot 50$$

$$C = 157 \text{ ft}$$

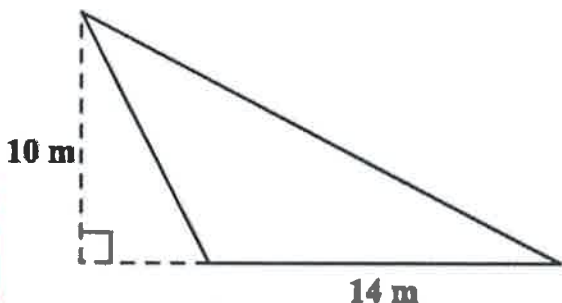


5. What is the area of the triangle?

$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2} \cdot 14 \cdot 10$$

$$A = 70 \text{ m}^2$$



6. The area of a triangle is 108 in^2 . If the height is 9 inches, what is the measure of the base?

$$A = 108$$

$$h = 9$$

$$b = ?$$

$$A = \frac{1}{2}bh$$

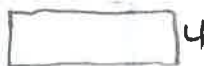
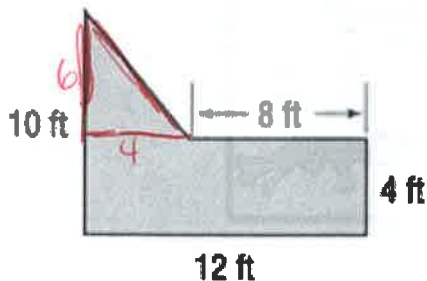
$$108 = \frac{1}{2} \cdot b \cdot 9$$

$$108 = 4.5b$$

$$\frac{108}{4.5} = \frac{4.5b}{4.5}$$

$$b = 24 \text{ in}$$

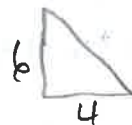
7. Find the area of the figure below:



$$A = bh$$

$$A = 12 \cdot 4$$

$$A = 48 \text{ ft}^2$$



$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2} \cdot 4 \cdot 6$$

$$A = 12 \text{ ft}^2$$

$$\begin{array}{r} 48 \\ + 12 \\ \hline \end{array}$$

ADD TOGETHER

$$A = 60 \text{ ft}^2$$

8. A bicycle wheel has a diameter of 8 inches. What is the circumference?

$$C = \pi d$$

$$C = 3.14 \cdot 8$$

$$C = 25.12 \text{ in}$$

9. What is the diameter on a circle that has a circumference of 213.52 meters?

$$C = \pi d$$

$$C = 213.52$$

$$d = ?$$

$$\frac{213.52}{3.14} = \frac{3.14 d}{3.14}$$

$$d = 68 \text{ m}$$

10. Find the area of the figure below.



$$A = bh$$

$$A = 20 \cdot 14$$

$$A = 280 \text{ cm}^2$$

$$\pi D \quad d = 14$$

$$r = 7$$

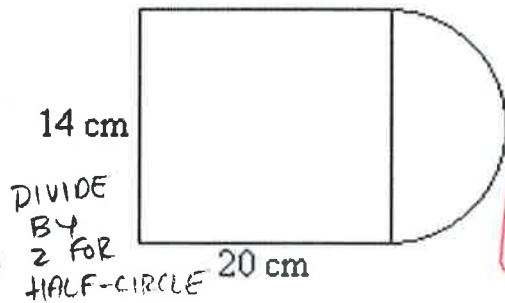
$$A = \pi r^2$$

$$A = 3.14 \cdot 7^2$$

$$A = 3.14 \cdot 49$$

$$A = 153.86 \div 2$$

$$A = 76.93$$



$$280.00$$

$$+ 76.93$$

$$A = 356.93 \text{ cm}^2$$

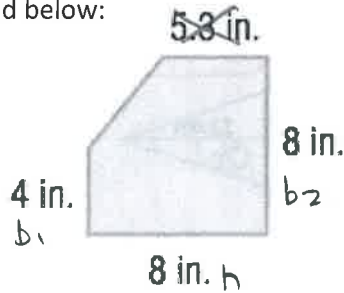
11. Calculate the area of the trapezoid below:

$$A = \frac{1}{2} (b_1 + b_2) h$$

$$A = \frac{1}{2} (4 + 8) 8$$

$$A = \frac{1}{2} \cdot 12 \cdot 8$$

$$A = 48 \text{ in}^2$$



12. What is the area of the figure to the right?



$$A = bh$$

$$A = 4 \cdot 4$$

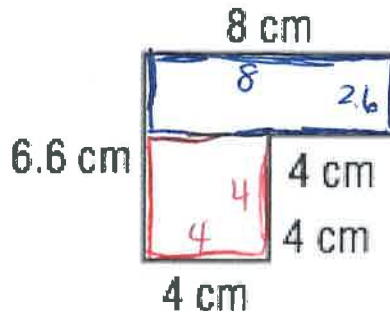
$$A = 16 \text{ cm}^2$$



$$A = bh$$

$$A = 8 \cdot 2.6$$

$$A = 20.8 \text{ cm}^2$$



$$20.8$$

$$+ 16.0$$

$$A = 36.8 \text{ cm}^2$$

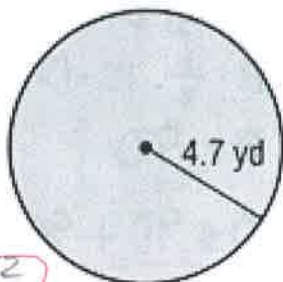
13. Find the area of the circle.

$$A = \pi r^2$$

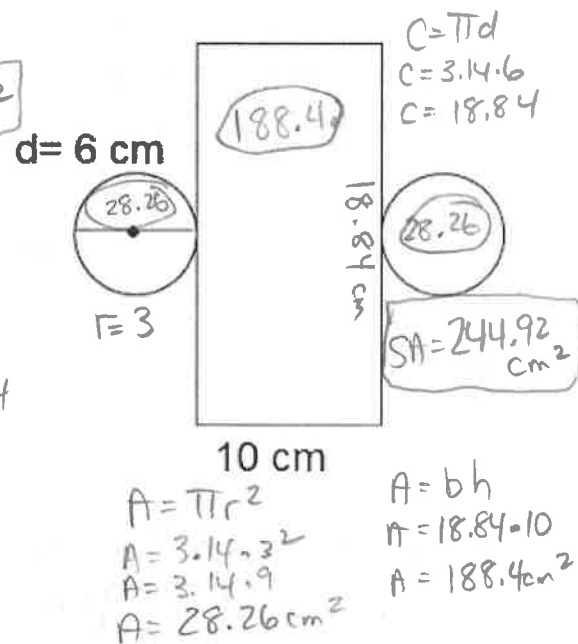
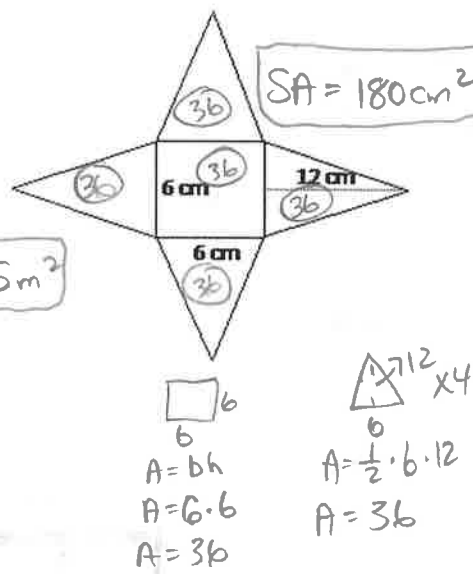
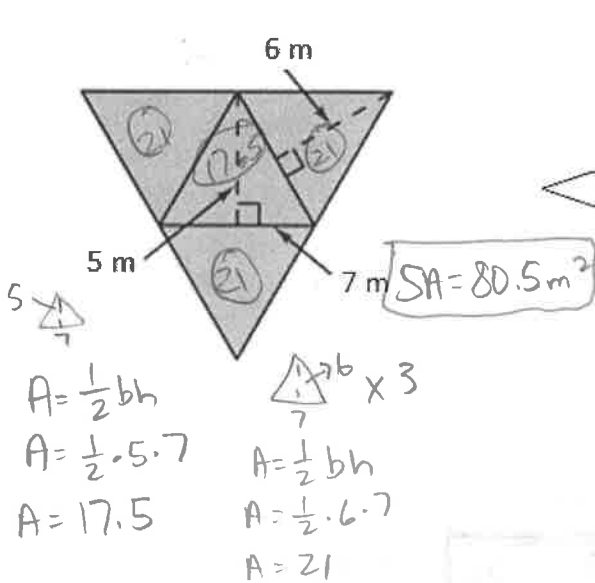
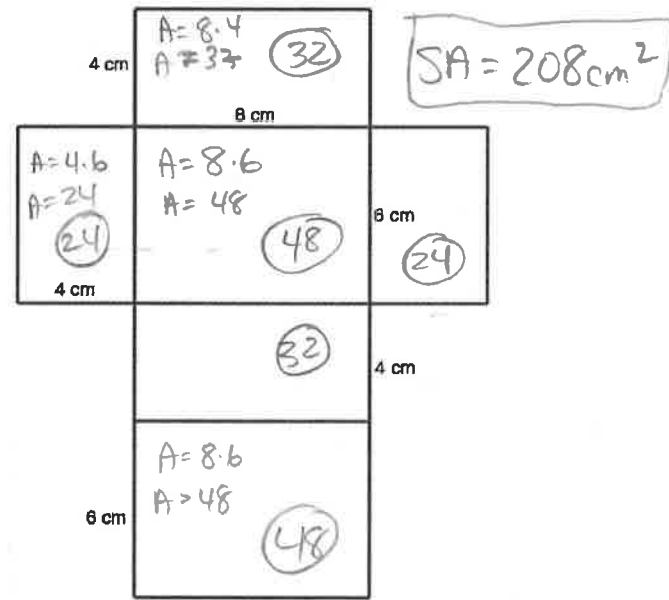
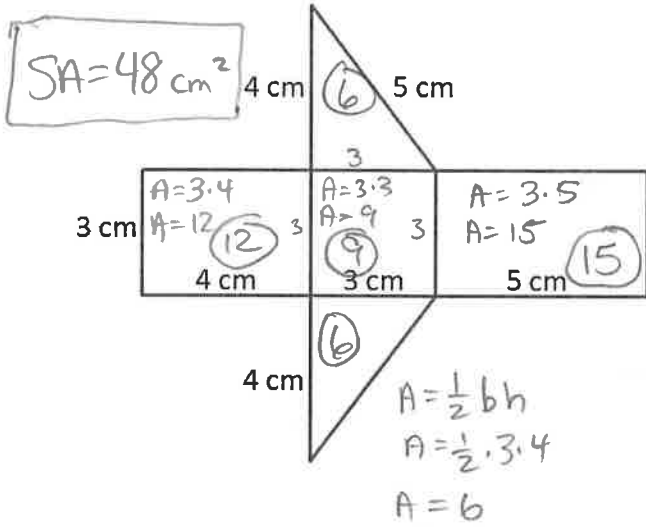
$$A = 3.14 \cdot 4.7^2$$

$$A = 3.14 \cdot 22.09$$

$$A = 69.3626 \text{ yd}^2$$



14. Find the surface area of each of the following 3D Figures.



15. Suppose that the slant height of a regular square pyramid is 15 cm and the length of one edge of the base is 12 cm. What is the surface area of this pyramid?

