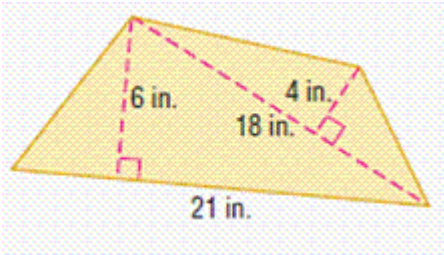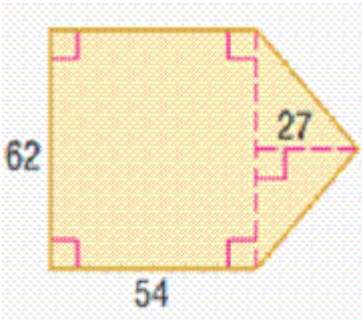# Area Unit Practice Test

Directions: **SHOW ALL WORK THROUGHOUT THE TEST- FORMULAS, WORK, AND FINAL ANSWER WITH UNITS!**

_____ 1. Find the area of quadrilateral *DEFG*.
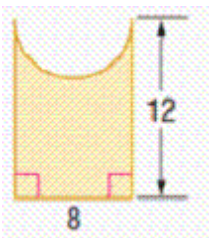

a.	63 in²	c. 100 in²
b.	99 in²	d. 308 in²

_____ 2. Find the area of the figure.

a.	4185 units²	c. 837 units²
b.	3348 units²	d. 20 units²

_____ 3. Find the area of the figure. Round to the nearest tenth. The area of a circle is $A = \pi r^2$, so the area of a semi circle is A= $\frac{1}{2} \pi r^2$
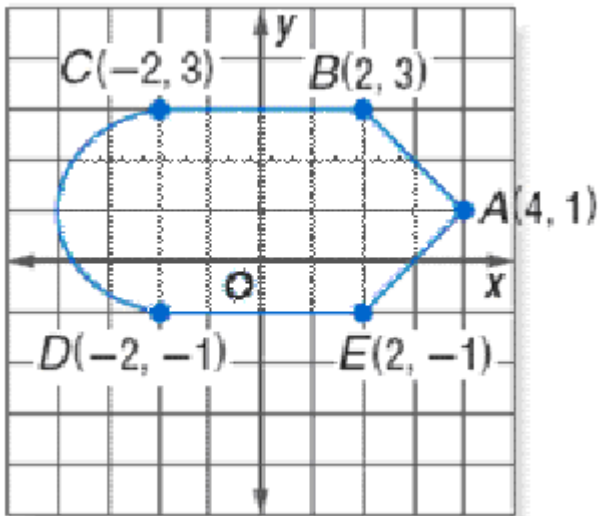

a.	45.7 ft²	c. 70.9 ft²
b.	96 ft²	d. 29.7 ft²

_____ 4. Find the area of the following composite figure.

12 cm

15 cm

9 cm
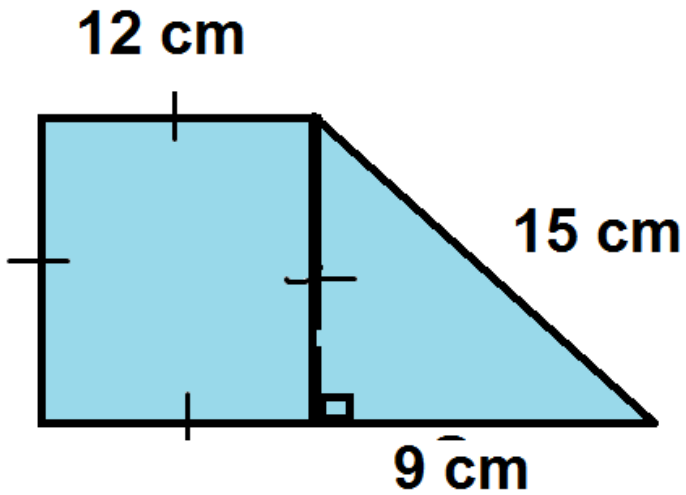
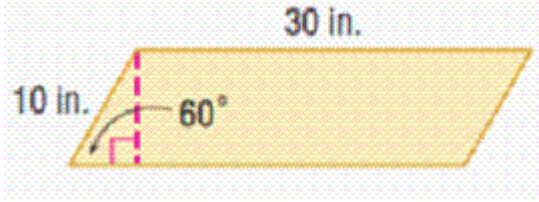a. $70\ cm^2$ c. $85\ cm^2$

b. $84\ cm^2$ d. $198\ cm^2$

_____ 5. Find the area of the figure. Then round to the nearest tenth.
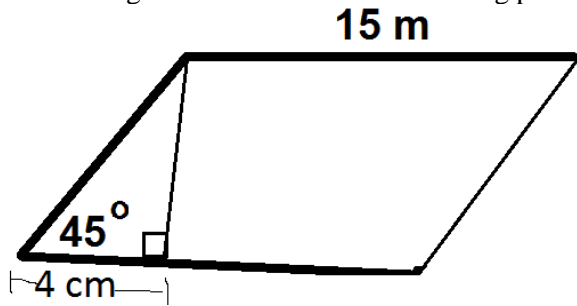

a. 37.7 units^2 c. 23.1 units^2

b. 26.3 units^2 d. 48.1 units^2

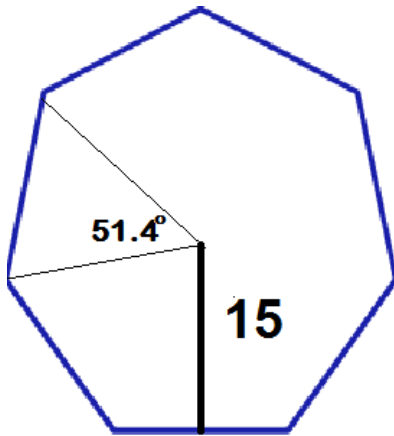_____ 6. Find the height and the area of the following parallelogram. $A = b \times h$

30 in.

10 in.

60°

a. $h = 8.7\text{in}; \quad A = 261 \ in^2$

b. $h = 10\text{cm}; \quad A = 348.0 \ cm^2$

c. $h = 8.7\text{cm}; A=174.0 \ cm^2$

d. $h =10\text{cm}; A = 200.0 \ cm^2$

_____ 7. Find the height and the area of the following parallelogram. $A = b \times h$

15 m

45°

4 cm

a. $h = 4 \text{ m}; \quad A = 60\text{m}^2$

b. $h = 2.8 \text{ m}; A = 22.8 \text{ m}^2$

c. $h =4 \text{ m}; A = 16 \text{ m}^2$

d. $h = 2.8 \text{ m}; A = 42 \text{ m}^2$

_____ 8. **Find the area of the regular polygon, given the apothem is 15 units.**


51.4°

15

a. 315.4 units^2

b. 547units^2

c. 758 units^2

d. 200 units^2

9. A goldsmith designed a trapezoidal pendant as shown in the figure. If the height of the trapezoid is 4 centimeters and **area** of the pendant *ABCD* is 32 square centimeters, **find the length of the side *CD*.**

a. 40

c. 10

b. 6
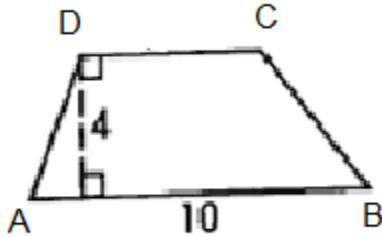
d. 32

10. A children's game is won by tossing a coin so that it lands on the shaded part of this board. If one coin is tossed, what is the probability of winning?


a. 100%

c. 76 %

b. 60%
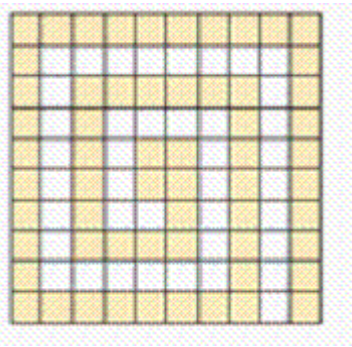
d. 59 %

11. Find the probability that a point chosen at random lies in the shaded region.

a. 87.5 %

c. 70.8 %

b. 50 %

d. 500 %

____ 12. Connor's family is putting in a new patio pool deck. The radius of the pool is 19 feet and the width of the pool deck must be 4 feet making it 23 feet from the outer edge of the deck to the center of the pool. COLOR IN THE POOL DECK!!!!!! THEN....
Find the area of the pool deck.
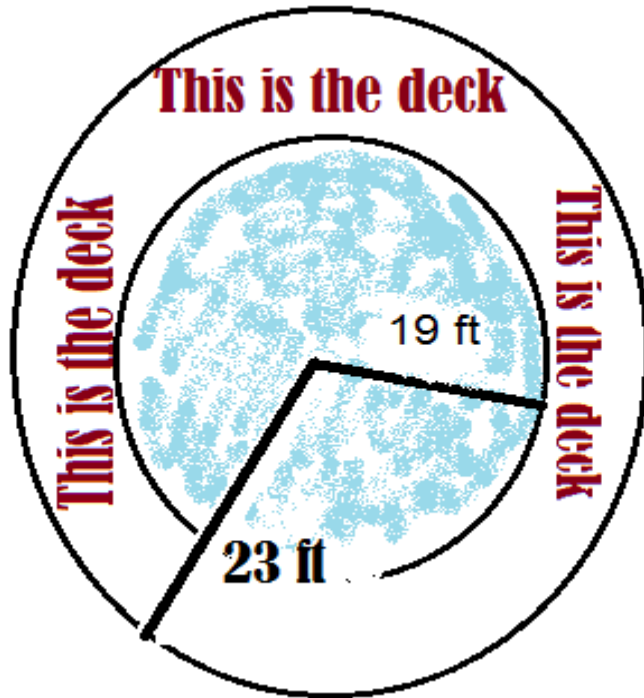
a. 1134.1 ft²   c. 706.9 ft²
b. 1661.9 ft²   d. 527.8 ft²

____ 13. A rectangular pane of glass measuring 14 inches by 16 inches is surrounded by a wooden frame that is 2 inches wide. What is the area of the window, including the frame?

18 in

20 in
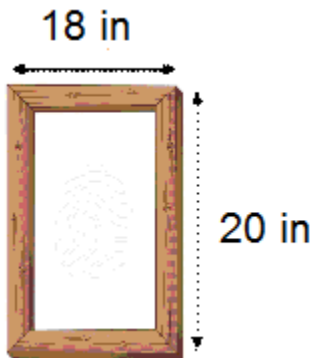
a. 108 in²   c. 360 in²
b. 352 in²   d. 224 in²

Short Answer
  REMINDER:*SHOW ALL WORK THROUGHOUT THE TEST- FORMULAS, WORK, AND FINAL*
                    ANSWER WITH UNITS!

14. Assume that the triangle is equilateral. Find the area of the shaded region and the probability that a random point lies in the shaded region. The radius is given to you as 15 inches and apothem is 7.5 inches. (Round all final answers to the nearest tenth, use rounding to the neartest 3 decimal places for all work)
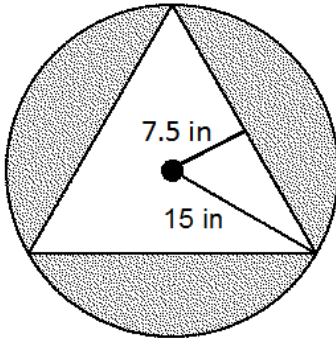
<div align="right">Area of shaded region=_____</div>


$$A_T = \pi r^2$$

<div align="right">Area of total =_____</div>

$$P(S) = \frac{A_s}{A_T}$$

Probability of a point chosen at random lies in the shaded region

$$P(S) = \underline{}\ \underline{}\ .\ \underline{}\%$$

15. A gardener installs 3 sprinklers in a square plot with sides that are 16 feet long. Each sprinkler waters a circular region with a radius of 4 feet, as shown below. No portion of the plot is watered by more than 1 sprinkler. What is the approximate area, in square feet, of the portion of the plot that is **NOT watered** by a sprinkler? (The shaded region)
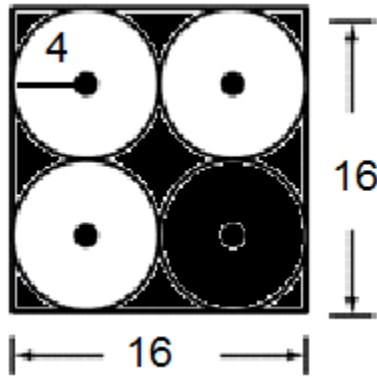
Area Unit Practice Test
Answer Section

MULTIPLE CHOICE

1. B
2. A
3. C
4. D
5. B
6. A
7. A
8. C
9. B
10. B
11. C
12. D
13. C

SHORT ANSWER

14. 414.6 in^2

    414.6/706.9

    58.7%%

15. 105.2 square feet