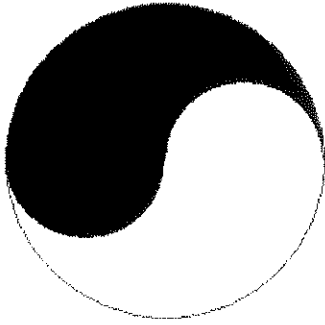


* Find PROBABILITIES ON 1,3 & 5

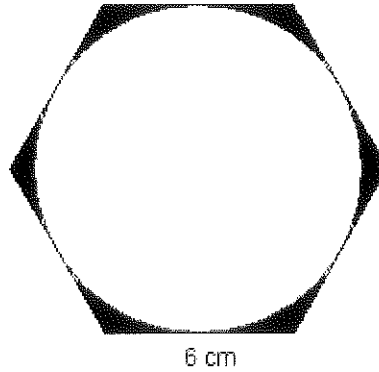
Name : _____

Date : _____

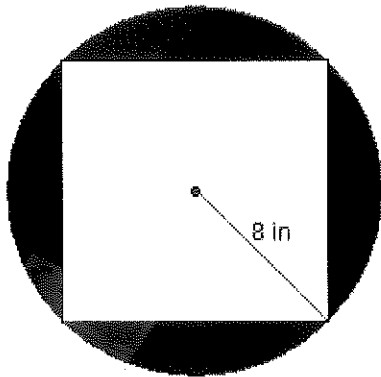
1) Find the area of the shaded region if the radius of the big circle is 12 cm.



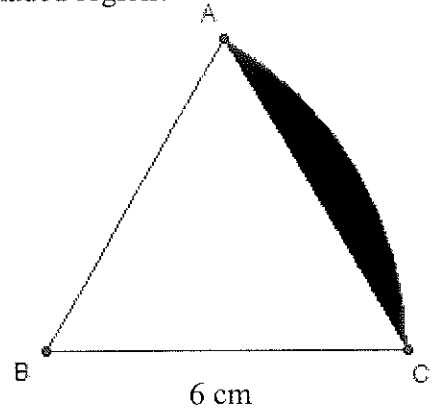
2) Find the area of the shaded region



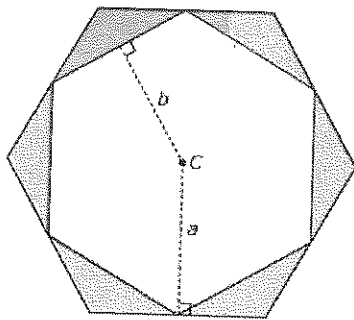
3) Find the area of the shaded region.



4) Triangle ABC is equilateral. The arc is part of a circle with center B and radius BA. What is the area of the shaded region?



5)

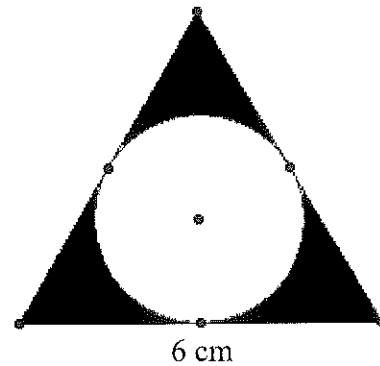


If $a = 12\sqrt{3}$ cm and $b = 18$ cm, what is the total area of the shaded regions?

- A $648\sqrt{3}$ cm²
- B $36\sqrt{3}$ cm²
- C $216\sqrt{3}$ cm²
- D $1,512\sqrt{3}$ cm²



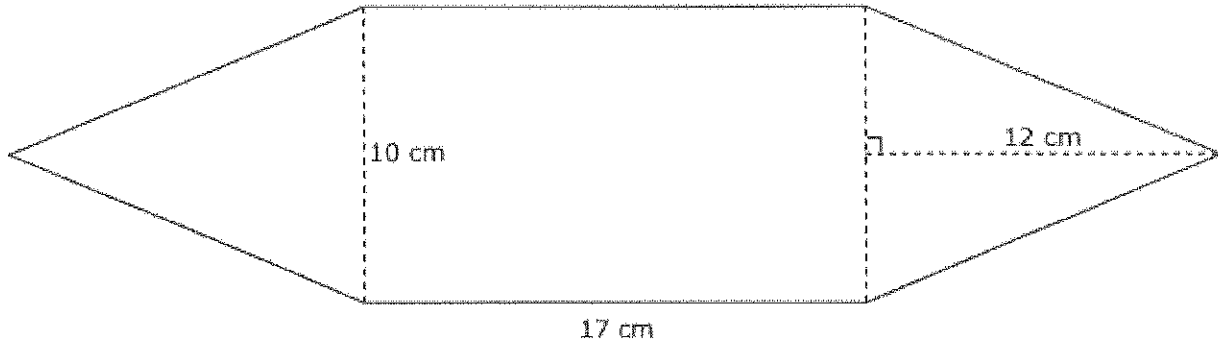
6) This problem is wicked hard!!! If you don't want to do it, don't :-). If you want a challenge, give it a try. Find the area of the shaded region. I left some points in there to get you started.



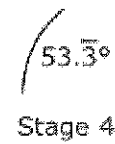
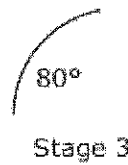
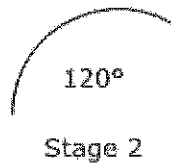
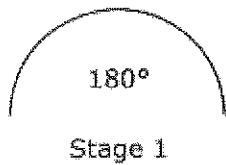
Two regular hexagons with center C and apothems a and b are shown in the figure below. Each vertex of the smaller hexagon is a midpoint on a side of the larger hexagon.

1. A pendulum is 45 centimetres long. When the pendulum swings it travels along the arc of a circle and covers a distance of 27.5 centimetres.

2. A banner is composed of two congruent triangles and a rectangle, as shown below.



3. The first four stages of a pattern of arcs from congruent circles are shown below.



4. If this pattern continues, which expression can be used to find the degree measure of the arc in Stage n ?

A $20(10 - n^2)$

B $180\left(\frac{1}{3}\right)^{(n-1)}$

C $60(4 - n)$

D $270\left(\frac{2}{3}\right)^n$

5. The beam from a lighthouse reaches a distance of 8 kilometres and spreads to an angle of 35° .

6. A town wants to fence in a rectangular section of a park. The table shows five possible plans for the dimensions of this fenced section. The changes in the width and the length of these plans follow a pattern.

Plan	Width (feet)	Length (feet)	Area (square feet)
1	16	34	544
2	18	32	576
3	20	30	600
4	22	28	616
5	24	26	624

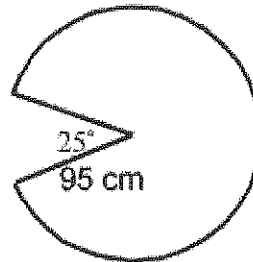
7. If six additional plans are added to the table and follow the same pattern, which conclusion is not correct?

- A The area of one of the additional plans exceeds 624 square feet.
- B The area of one of the additional plans is less than 544 square feet.
- C The area in Plan 6 is the same as the area in Plan 5.
- D The area in Plan 7 is less than the area in Plan 6.

8. The side length of a smaller square is one-third the side length of a larger square. Which of the following statements describes the area of the smaller square?

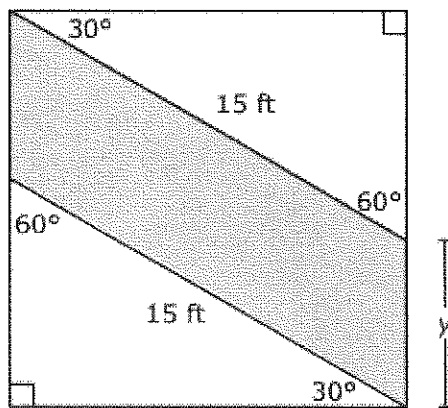
- F The area of the smaller square is $\frac{1}{27}$ the area of the larger square.
- G The area of the smaller square is $\frac{1}{6}$ the area of the larger square.
- H The area of the smaller square is $\frac{1}{9}$ the area of the larger square.
- J The area of the smaller square is $\frac{1}{3}$ the area of the larger square.

9. The path traced by a golfer's club when he hits the ball is an arc of a circle. If the golf club is 95 centimetres long, calculate the distance travelled when the golfer swings his club.



10.

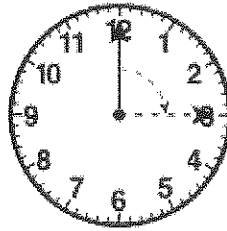
Within a square section of land, a landscaper will build a path, as represented by the shaded section in the diagram below.



Which measure is closest to the value of y ?

- A 5.5 ft
- B 3.1 ft
- C 4.3 ft
- D 7.5 ft

- 11 The hand on the circular clock in the figure below measures 10 cm.



Which of the following is closest to the distance that the tip of the hand travels as it moves from the 12 to the 3?

- A 79 cm
- B 21 cm
- C 63 cm
- D 16 cm

12. A triangle is enlarged by multiplying each of its dimensions by 4. Based on this information, which of the following statements is true?

- F The perimeter of the new triangle is 12 times the perimeter of the original triangle.
- G The perimeter of the new triangle is 16 times the perimeter of the original triangle.
- H The perimeter of the new triangle is 18 times the perimeter of the original triangle.
- J The perimeter of the new triangle is 4 times the perimeter of the original triangle.

13.

Find the area of the shaded region

