NAME_____DATE_____PER.____

PERIMETER & AREA OF REGULAR POLYGONS

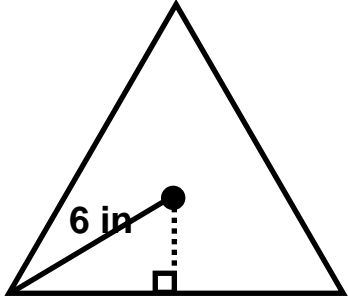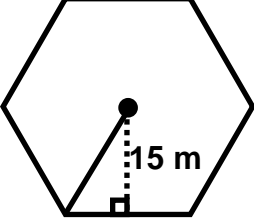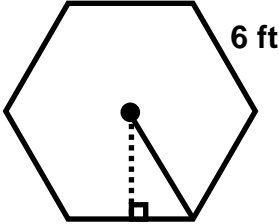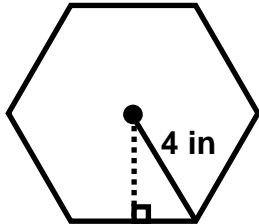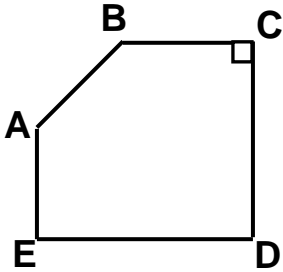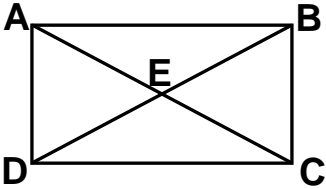**Find the perimeter & area for each of the regular polygons below.**
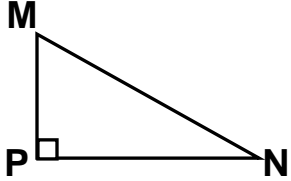
1. P = _____ A = _____	 6 cm
2. P = _____ A = _____	 $8\sqrt{3}$ m
3. P = _____ A = _____	 6 in
4. A = _____	Find the area of a regular triangle with a perimeter of 144 inches.
5. P = _____ A = _____	Find the perimeter and area of a regular triangle with an apothem of 9 ft.

Find the perimeter & area of each regular polygon.

6. P = _____

A = _____

15 m

7. P = _____

A = _____

6 ft

8. P = _____

A = _____

4 in

9. A = _____

Find the area of a regular hexagon with a perimeter of 60 ft.

10. A = _____

Find the area of a regular hexagon with a perimeter of 24 in.

11. A = _____

Find the area of a square with an apothem length of $2\sqrt{2}$.

Review

12. _____	In the figure below, BC is parallel to ED and AE is perpendicular to ED. The measure of ∠ABC is 130°. What is the measure of ∠BAE in degrees? **B**　　**C** **A** **E**　　**D**
13. _____	Which of the following is true of all squares and all rectangles? 　I. All squares and all rectangles are equilateral. 　II. All squares and all rectangles are equiangular. 　III. All rectangles are squares. A. II only B. III only C. II and III only D. I, II, and III
14. _____	In the figure below, if ABCD is a rectangle, what type of triangle must △ABE be? F. Equilateral G. Right H. Equiangular J. Isosceles K. Scalene **A**　　　　**B** 　　**E** **D**　　　　**C**
15. _____	If ABCDE is a regular pentagon, what is the measure of ∠C? A. 45° B. 60° C. 90° D. 108° E. 120°

16. _____	Which of the following has the same value as sin M? A. sin N B. tan M C. cos N D. cos M M P N
17. _____	Scott finds that an office building casts a shadow that is 93 ft long when the angle of elevation to the sun is 60°. What is the height of the building? F. 54 feet G. 81 feet H. 107 feet J. 161 feet