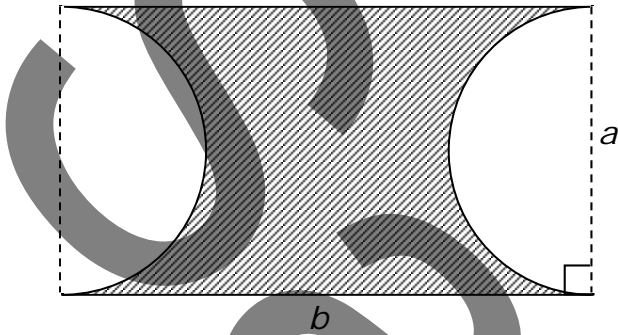Name _____ Date _____

## Perimeter and Area of Polygons and Circles
Independent Practice

Use the following figure for questions 1 – 3.

1. Write an expression that represents the area of the rectangle.

2. Write an expression that represens the area of the unshaded portion of the figure.

3. Write an expression that represents the area of the shaded portion of the figure.

Use the following figure for questions 4 – 7.
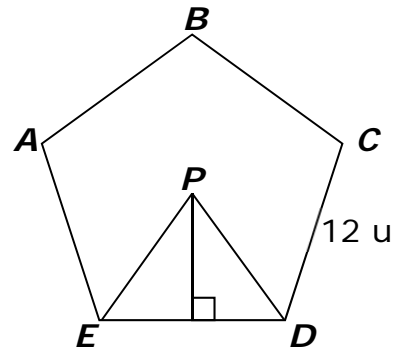
*ABCDE* is a regular pentagon with side length 12 u.

4. What is the side length of each interior angle in the regular pentagon?

5. What is the measure of ∠*DEP*?

6. What is the length of the apothem to the nearest hundredth?

7. What is the area of the regular pentagon to the nearest tenth?

Use the following figure for questions 8 – 11.
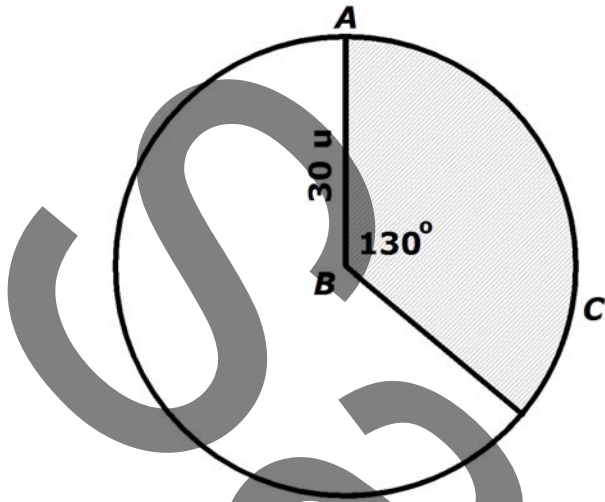
8. Find the circumference and area of ⊙*B*. Give your answers in terms of π.

9. What fraction of the circle is shaded?

10. What is the area of sector *ABC*? Give your answer in terms of π.

11. What is the length of $\overset{\frown}{AC}$?

Use the following diagram for questions 12 – 15.
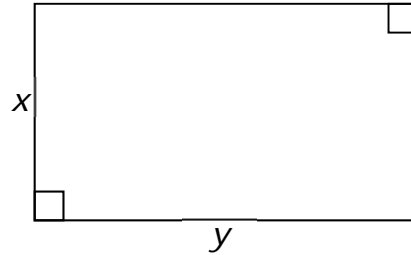
12. If the length and width of the rectangle tripled, what is the effect of the change on the perimeter?

13. If the length and width of the rectangle are multiplied by $\frac{1}{2}$, what is the effect of the change on the area?

14. If the length of the rectangle is multiplied by $\frac{1}{3}$, and the width is multiplied by 6, what is the effect of the change on the area?

15. If the perimeter of the rectangle is multiplied by 4, what is the effect of the change on the area?