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Per. $\qquad$ Group \#: $\qquad$
**Directions ${ }^{* *}$ Show ALL your work for each question, including writing out formulas. Use the $\pi$ button on your calculator where necessary. Round your answers to the hundredths place and box your answers.

1. A rectangle has a perimeter of 72 inches. The height is three times the length of the base. Find the area of the rectangle.
2. Find the area of the parallelogram.

3. Find the circumference and area of circle C .

4. Find the area of the square.

5. Find the area of the regular pentagon.

6. Find the height of the trapezoid below:

7. Find the area of the kite.

8. Find the area of the figure. Assume all angles are right angles.

9. The base and height of a parallelogram are multiplied by 4 . What is the effect on the area of the parallelogram? Answer in a complete sentence.
10. Find the probability that a dart that hits the large square target at a random point will hit the shaded region.

11. Find the area of the shaded region of the figure.

12. Given that a circle is inscribed in the square find the area of the circle.

13. A point is chosen at random on $\overline{E H}$. Find the probability that the point is on $\overline{F H}$. (Leave your answer in decimal form)

14. Find the perimeter and area of the polygon with vertices $\mathrm{D}(-5,0), \mathrm{E}(2,4)$ and $\mathrm{F}(4,0)$. Be sure to graph the shape and show ALL work.

15. Find the perimeter and area of the polygon with vertices $\mathrm{A}(-3,2), \mathrm{B}(2,4), \mathrm{C}(4,-3)$, and $\mathrm{D}(-4,-3)$. Be sure to graph the shape and show ALL work.

