$\qquad$ Due Date $\qquad$ Period $\qquad$

## Unit 14 Review: Lines and Quadrilaterals

Give an example for each of the following and use appropriate notation:

1) Ray
2) Circle
3) Line
4) Parallel Lines

For each of the following examples find a line parallel AND perpendicular to the given line through the same point. le. Given the line $y=2 x+4$ find the line perpendicular through the point $(4,2)$ and the line parallel through the point $(4,2)$.
7) Find the equations of the lines II and $\perp$ to $y=2 x-8$ through the point $(2,8)$.
8) Find the equations of the lines that pass through ( $-1,2$ ) and are \|l and $\perp$ to $y=-\frac{1}{3} x+4$
9) What is the equation of the lines that pass through $(3,7)$ and are $\|$ and $\perp$ to the line $y=3 x-2$
10)The line $l$ and $m$ contains the point $(3,4)$ line $l$ is $\perp$ and line $m$ is $\|$ to a line that passes through $(5,3)$ and $(-2,-4)$. Write the equations of line $l$ and $m$.
11) Graph a line that is perpendicular to the line on the graph that passes through the point $(-2,0)$. Place the digits and a symbol in the boxes to indicate the slope of this line.

12) Anne drew the function $y=2 x+5$. Use the add arrow tool to draw a line to draw a line that is
a. parallel to Anne's function
b. perpendicular to Anne's function
(1) Delete $>$ Add Point $\rightarrow$ Add Arrow $\rightarrow$


Find the perimeter and area of the indicated figures:
13)A polygon with the vertices at $A(-2,1)$, $B(1,5), C(5,5)$ and $D(2,1)$ ?
14) A triangle is defined by the points $A(-2,1), B(1,5), C(8,9)$.

Quadrilaterals:
15) Which property is sufficient to prove that a parallelogram is a rectangle:
a. Opposite sides must be congruent
b. The diagonals must bisect each other
c. The diagonals must be congruent
d. The diagonals must be perpendicular
16) Porter claims the figure below is a parallelogram. If he's correct, what are the coordinates of point $E$ ?

17) Three vertices of a rectangle are at ( $-90,-52$ ), ( $-70,-2$ ), and $(30,-42)$ on the coordinate grid. Where is the fourth vertex located?
18) Quadrilateral $W X Y Z$ has vertices $W(1,4), X(5,1), Y(8,4)$, and $Z(5,7)$. What type of Quadrilateral is $W X Y Z$ ?
19) Draw a quadrilateral that is NOT a rectangle. Calculate the perimeter of your quadrilateral to the nearest tenth of a unit. (You do not need to fill all the places if your quadrilateral has a perimeter that is less than 1,000.)


