Name: _____   Date: _____   Period: _____

Name the quadrant in which the graph of each point described appears.

1. (5, 7)   2. (-3, -2)   3. (-7, 4)   4. (1, -3)   5. ($|$-2$|$, $|$-3$|$)

6. Graph several points on the x-axis. What is the value of the ordinate for every point in the set of points on the x-axis?

7. Graph several points on the y-axis. What is the value of the abscissa for every point in the set of points on the y-axis?

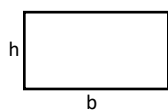8. What are the coordinates of the origin in the coordinate plane?

You will need the following AREA formulas for the rest of the worksheet:
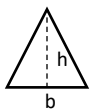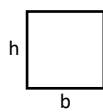
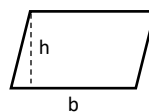| Triangle	Rectangle	Square	Parallelogram	Rhombus	Trapezoid
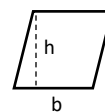
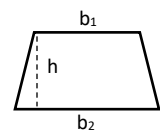$A = \dfrac{bh}{2}$ $A = bh$ $A = \dfrac{(b_1+b_2) \cdot h}{2}$

In questions 9 – 18:
   a. Graph the points and connect them with straight lines in order, forming a polygon.
   b. Tell what kind of polygon is drawn (use the pictures above as guidance)
   c. Find the AREA of the polygon (use the formulas above)

9.   S (1, 1), A (8, 1), L (1, 5)   10.   A (0, 0), L (5, 0), E (5, 4), X (0, 4)

11. B (8, -1), A (9,3), R (4, 3), T (3, -1)   12.   A (-4, 0), N (0, 0), D (0, 4), Y (-4, 4)

13. D (5, -3), A (5, 3), N (-2, 0)   14.   B (5, 1), E (5, 5), T (0, 5), H (-2, 1)

15. B (-2, -2), R (2, -2), A (2, 2), D (-2, 2)   16.   D (-3, 0), A (0, 0), W (2, 2), N (-1, 2)

17. B (-4, 2), E (0, 2), N (0, 7)   18.   F (-1, -1), R (3, -1), E (3, 3), D (-1, 3)

19. Graph points J (1, 1), O (5, 1), and A (5, 4). What must the coordinates of point N be if JOAN is a rectangle?

20. Graph points T (-2, -4) and R (2, -4). What are the coordinates of O and Y if TROY is a square? (Two answers are possible)

21.   (a) Graph points S (3, 0), T (0, 4), A (-3, 0), and R (0, -4), and draw the rhombus STAR.
         (b) Find the area of STAR by adding the areas of the triangles into which the axes separate the rhombus.

22.   (a) Graph points P (2, 0), L (1, 1), A (-1, 1), N (-2, 0), E (-1, -1), and T (1, -1), and draw the hexagon PLANET.
         (b) Find the area of PLANET. (*Hint: Use the x-axis to separate the hexagon into two parts*)