

# Linear Alignment

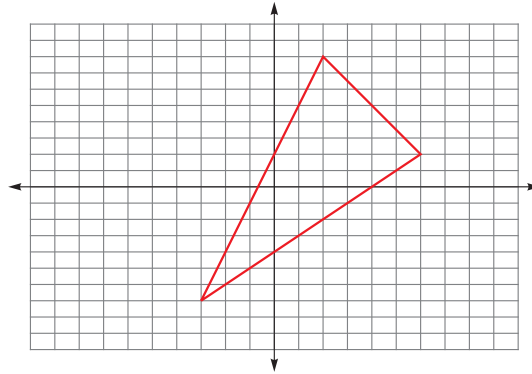
NAME \_\_\_\_\_

For each problem below:

1. Use the LIST feature of your graphing calculator or other graphing utility to enter the points given in the table on the left.
2. Graph a line plot using the list of coordinates.
3. Determine the linear equation in slope-intercept form for each side of the polygon.
4. Record your equations near the corresponding segment in the graph on the right.
5. Record observations on page 2 of this activity sheet as you are working.

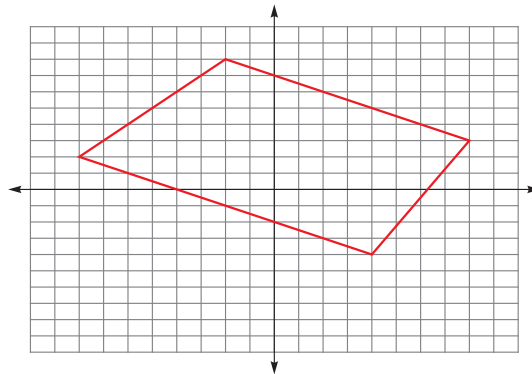
1.

$x$	$y$
2	8
6	2
-3	-7
2	8



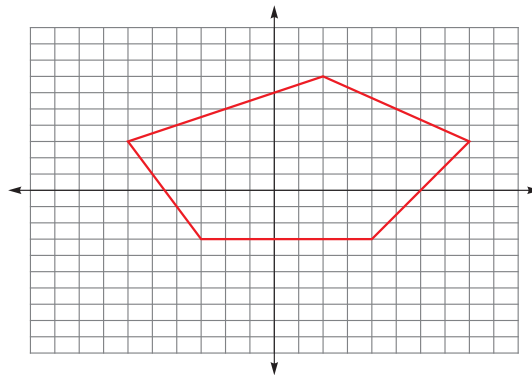
2.

$x$	$y$
-2	8
-8	2
4	-4
8	3
-2	8



3.

$x$	$y$
8	3
2	7
-6	3
-3	-3
4	-3
8	3



The slope-intercept form of a linear equation is  $y = mx + b$ , where  $m$  represents the slope of the line and  $b$  represents the  $y$ -intercept. Record observations below as you change  $m$  and  $b$ . These may include the effects of different values (such as positive integers, negative integers, fractions, and decimals) or how increasing or decreasing a value changes the graph.

4. Observations about slope:

5. Observations about  $y$ -intercept: