Lesson Title 3.1 The Coordinate System & Plotting Ordered Pairs DAY TWO NOTES **B2A2 Date** _____

OBJECTIVE 2: Defining the Rectangular Coordinate System & Plotting Ordered Pairs of Numbers

Remember the cigarette/vape question from yesterday? Time in minutes was your x-axis and Pulse Rate in beats per minute was your y-axis. Together those make an ordered pair. Every point on a graph corresponds to a coordinate of numbers in the notation (x-value, y-value).

The x-value always moves your point left and right while the y-value moves your point up and down.

Task 1: Explain how the coordinates move on a graph.

a) (2, 3) → 2u ↑ 3u

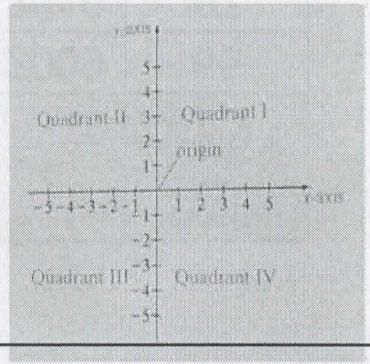
b) (- 4, 0) ← 4u

c) (5, - 6) → 5u ↓ 6u

A coordinate plane is two number lines combined. One is horizontal (x-axis) and the other is vertical (y-axis).

If you stay at the intersection of the two axes, then you are at the origin or (0, 0).

The two axes split the graph into four quadrants. Top right is quadrant 1 and then it makes a C to number the last three quadrants.



Task 2: State where each coordinate lies: quadrant or axes.

a) (5, 3) I

b) (0, 2) y-axis

c) (- 5, 3) II

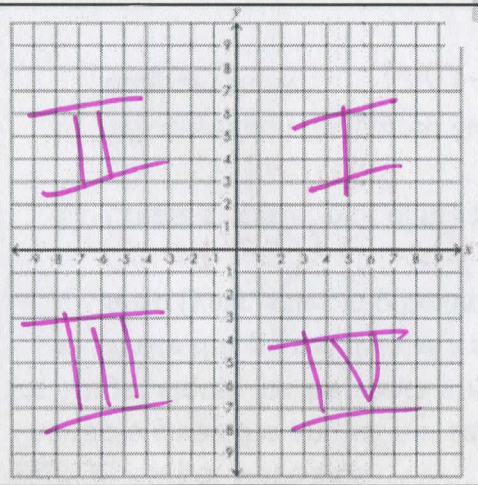
d) (- 5, 0) x-axis

e) (- 2, - 4) III

f) $(0, -5\frac{1}{2})$ y-axis

g) (1, - 2) IV

h) $\left(4\frac{2}{3}, -3\right)$ IV



OBJECTIVE 3: Graphing Paired Data

Data that can be represented as an ordered pair is called paired data. Many types of data collected from the real world are paired data.

ie: (year, height in inches) & (time, number of heart beats)

The graph of paired data as points on a coordinate plane are called a scatter diagram or scatter plot. These graphs are used to look for patterns or trends in the paired data.

Task 3: Target Net Sales

The table gives the annual net sales (in billions of dollars) for Target stores for the years shown.

a) Write this paired data as a set of ordered pairs of the form (year, sales in billions of dollars).

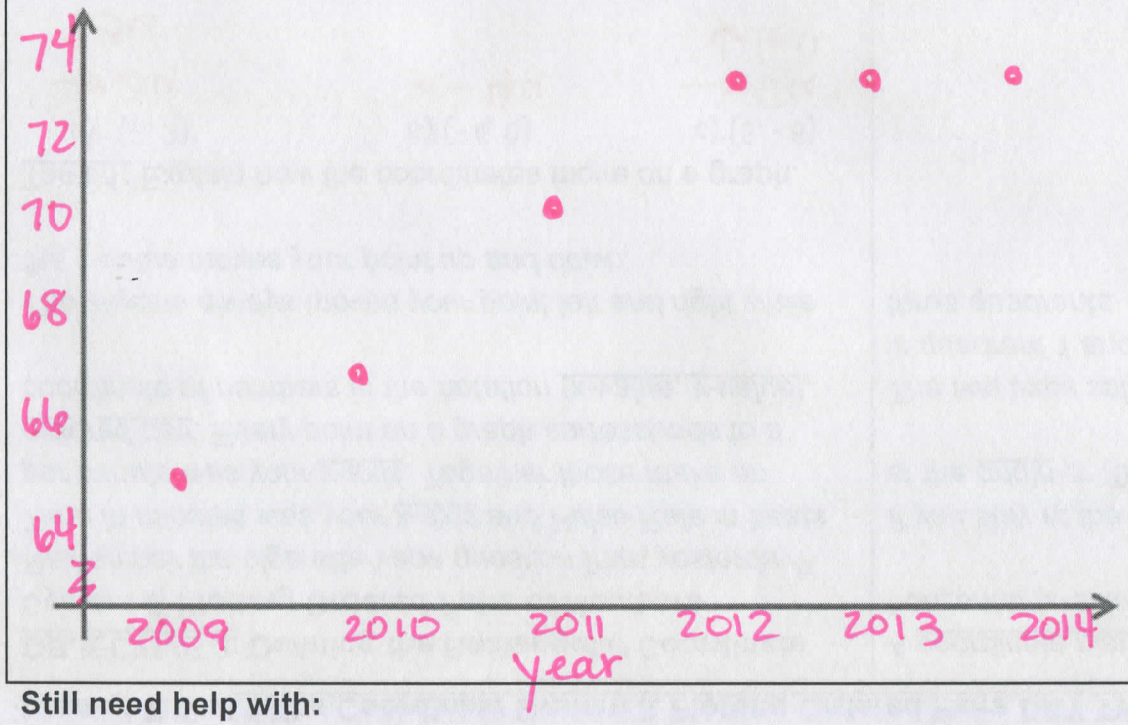
(2009,65); (2010;67); (2011, 70); (2012, 73) (2013, 73) (2014, 73)

b) Create a scatter plot of the paired data.

below

c) What trend in the paired data does the scatter diagram show?

increasing



Year	Target Net Sales (in billions of dollars)
2009	65
2010	67
2011	70
2012	73
2013	73
2014	73

Still need help with: