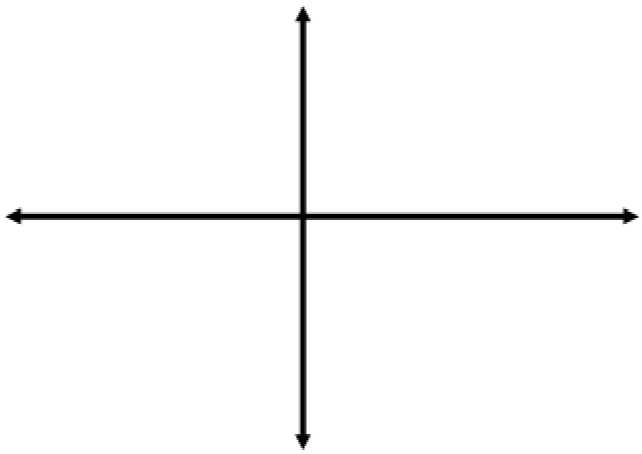
<u>1.7: Represent Functions as Graphs</u>

Goals: *****Graph ordered pairs (*x*, *y*)
*****Graph functions so you can visualize trends
*****Decide if a graph represents a function based on the "vertical line test"

RECALL

Coordinate Plane

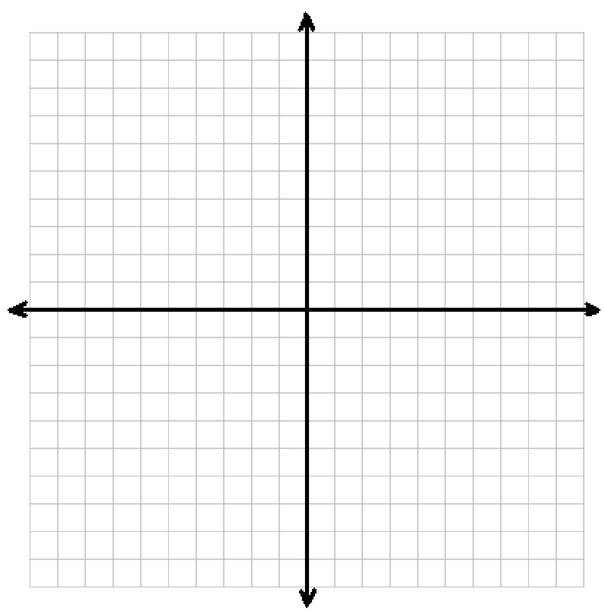


<u>To graph ordered pairs</u>:

1. Start at the __________________.

2. First go __________ or ____________.

3. Then go _________ or _____________.

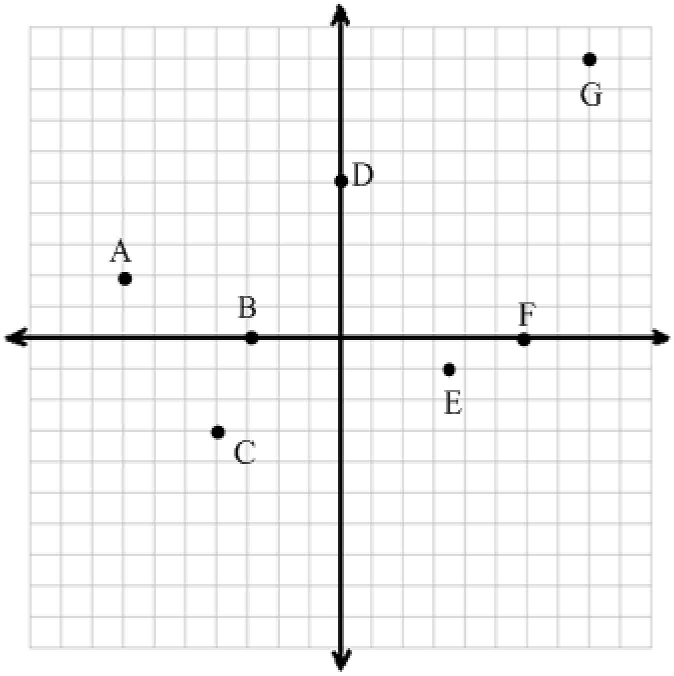


Ex: Graph, and label, the following ordered pairs.

A (5, 4) B (3, –7) C (–1, 2) D (–6, –5)

E (7, 0) F (0, –2) G (–3, 0) H (–1, 2.5)

Ex: Match the ordered pairs with correct point on the graph.



(–7, 2) =

(6, 0) =

(8, 9) =

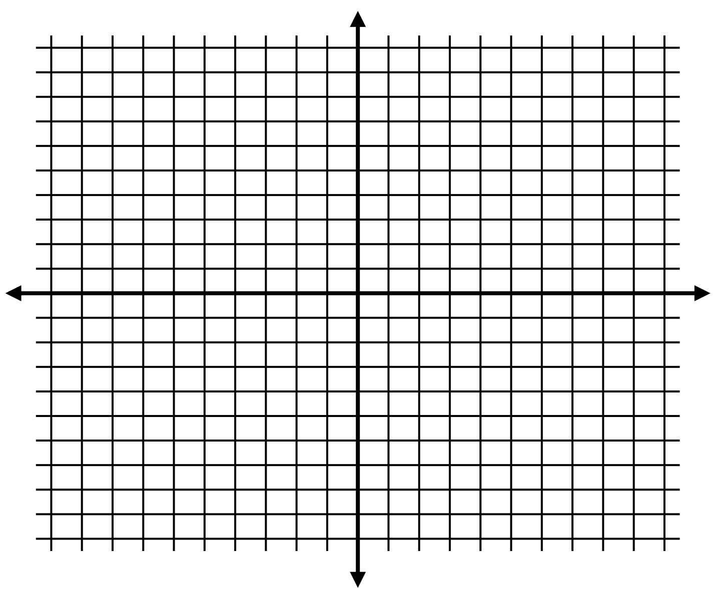
(–4, –3) =

(0, 5) =

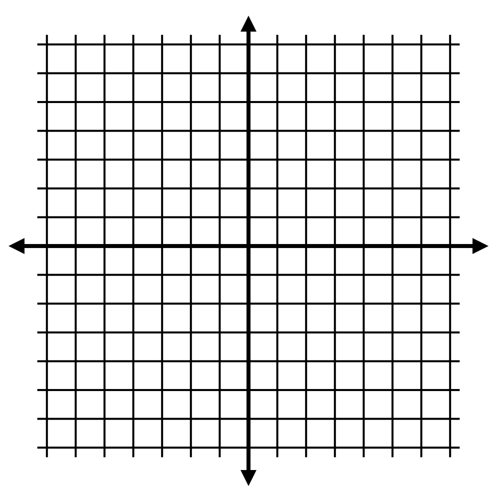
(–3, 0) =

(3.5, –1) =

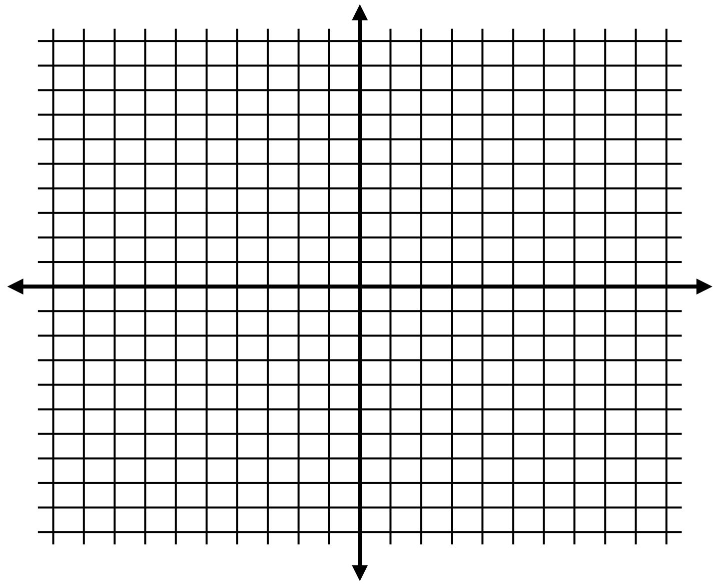
Ex: Graph the function $y = \frac{1}{2}x$ with a domain of 0, 2, 4, 6, 8



Ex: Graph the function $y = 2x - 3$ with a domain of 2, 3, 4, 5

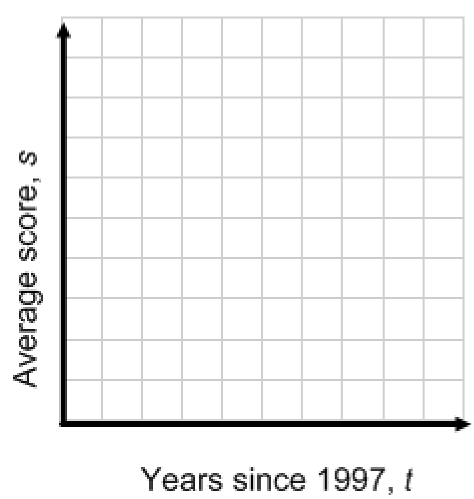


Ex: Graph the function $y = 2x - 1$ with a domain of 1, 2, 3, 4, 5



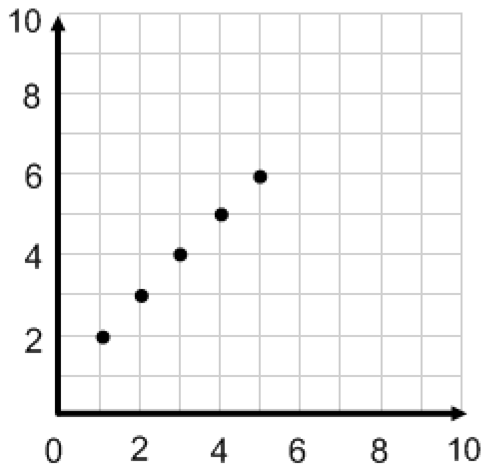
Ex: The table shows the average score, *s*, on the mathematics section of the SAT in the United States from 1997 to 2003 as a function of time, *t*, since 1997. In the table, 0 corresponds to the year 1997, 1 to 1998 and so on. Graph the function. What trend, if any, do you notice?

Years since 1997, *t*	0	1	2	3	4	5	6
Average score, *s*	511	512	511	514	514	516	519

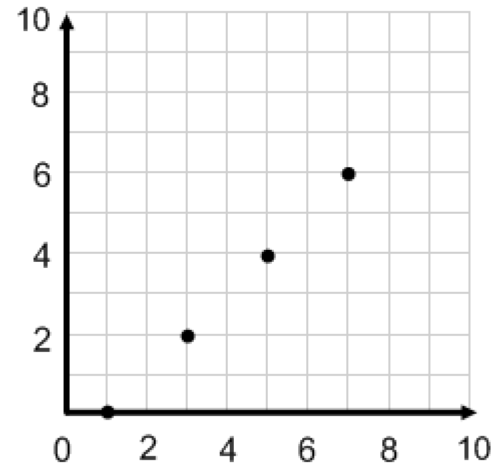


For each graph given, write a rule for the function, then identify the domain and range.

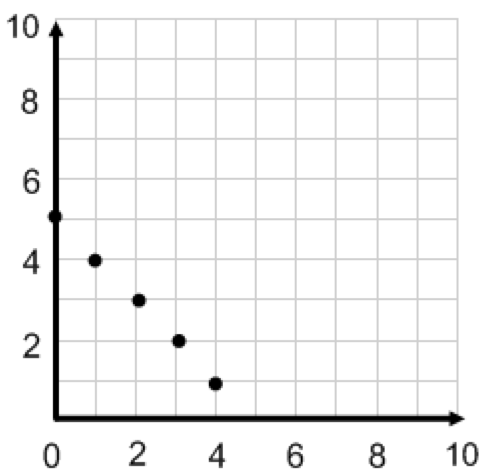
Ex:



Ex:



Ex:



Ex: