

You need 2 sheets of white (or construction) paper.

You will need your calculator today.

Turn in your homework.

Characteristics of Functions
PART 2:

Decoding Graphs of Linear
Functions

Domain & Range

X and Y Intercepts

End Behavior

DOMAIN
All x-values

Range
All y-values

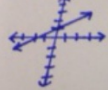
$\{x_1, x_2, x_3, \dots\}$ ← From coordinates, maps, or tables → $\{y_1, y_2, y_3, \dots\}$

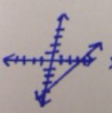
$(-\infty, \infty)$ OR
(highest x value, lowest x value) ← From a graph → $(-\infty, \infty)$ OR
(highest y value, lowest y value)

Domain & Range

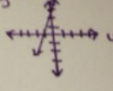
x and y Intercepts

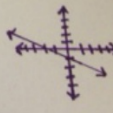
X-intercepts
Where a line crosses
the X-axis.


 x-int: $(-2, 0)$

 x-int: $(4, 0)$

Y-intercepts
Where a line crosses
the Y-axis.

 y-int: $(0, 3)$

 y-int: $(0, -1)$

X and Y Intercepts 

Describes what a line is doing as it continues off the graph.

→ Two ways to see it written:

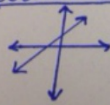
① As x increases, y _____; as x decreases, y _____.

② As $x \rightarrow \infty$, $y \rightarrow$ _____; As $x \rightarrow -\infty$, $y \rightarrow$ _____.

(Read "as x approaches infinity, y approaches _____";
as x approaches negative infinity, y approaches _____.")

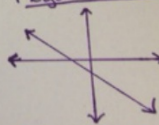
Linear Functions are easy to remember because
there are only 2 possible answers for end behavior:

positive slope



As $x \rightarrow \infty$, $y \rightarrow \infty$
As $x \rightarrow -\infty$, $y \rightarrow -\infty$

negative slope



As $x \rightarrow \infty$, $y \rightarrow -\infty$
As $x \rightarrow -\infty$, $y \rightarrow \infty$

End Behavior

