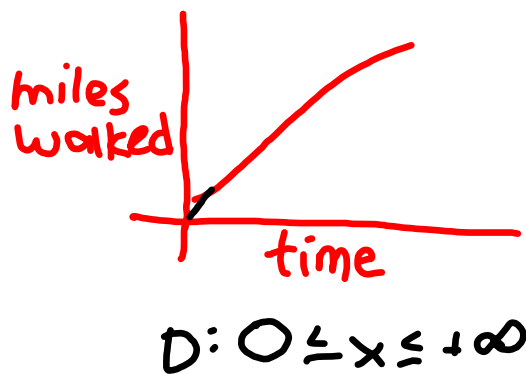
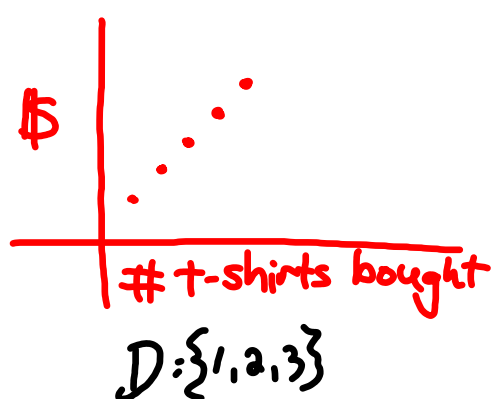


Domain and Range - continuous graphs

EQ: How do I limit a continuous graph?

Discrete vs. Continuous



Vocabulary

Continuous Graph - a function where all intermediate values can be evaluated. A graph where points are connected with lines.

Inequality Notation - defines the constraints of a function using inequality signs.

Example: $8 \leq x \leq 12$

~~Interval Notation - defines the constraints of a function as an interval using parentheses and brackets. Example: $[8, 12]$~~

Domain from continuous graph:

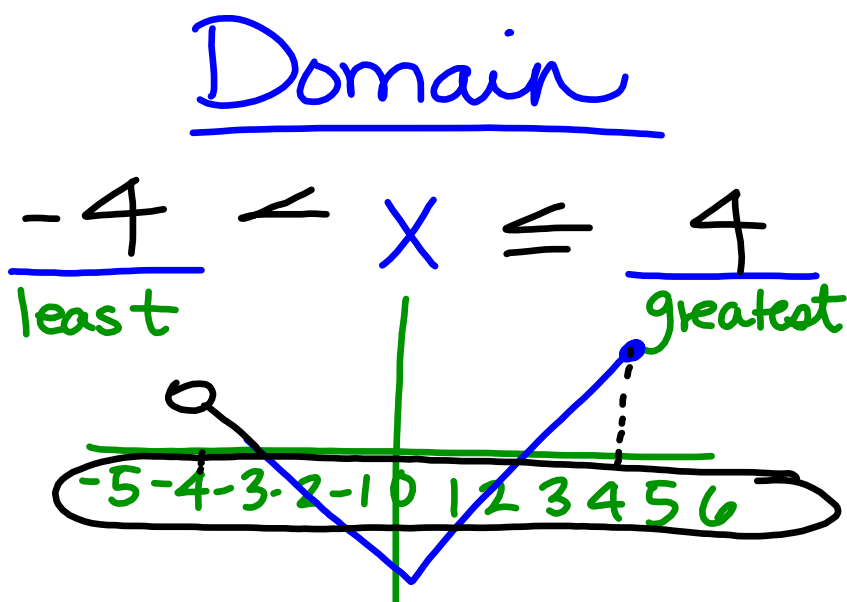
Step 1: Find the left and right-most points on the graph and label your x's.

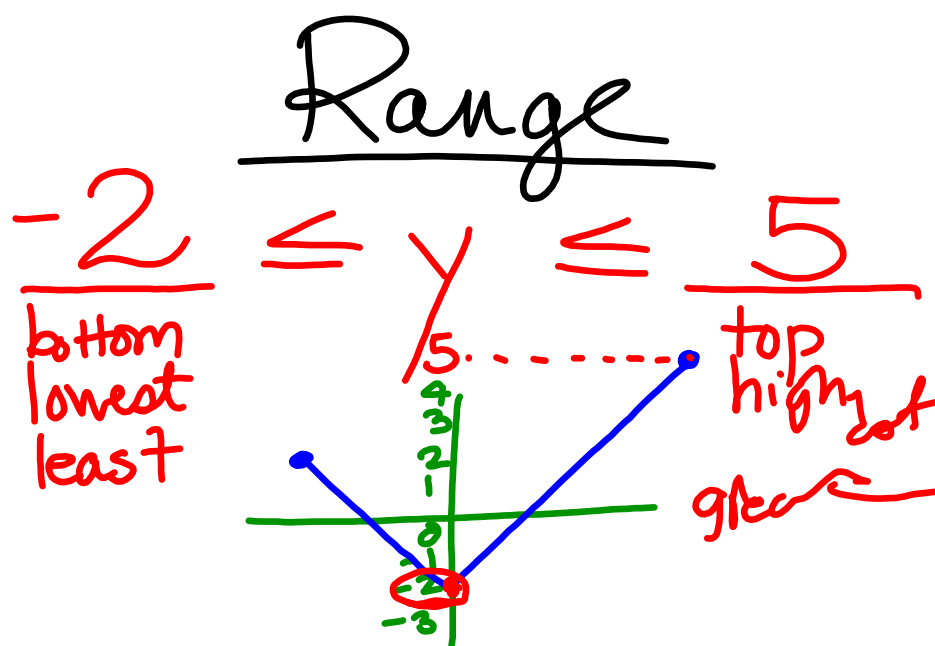
Step 2: Write in inequality notation:

$left\ x \leq x \leq right\ x$ or $[left\ x, right\ x]$

*If the graph has an open-dot or does not reach a value, use $<$ instead of \leq or $($ instead of $]$.

**If the graph doesn't end on the left, use $-\infty$. If it doesn't end on the right, use ∞ .





Range from continuous graph:

Step 1: Find the bottom and top-most points on the graph and label your y's.

Step 2: Write in interval notation:

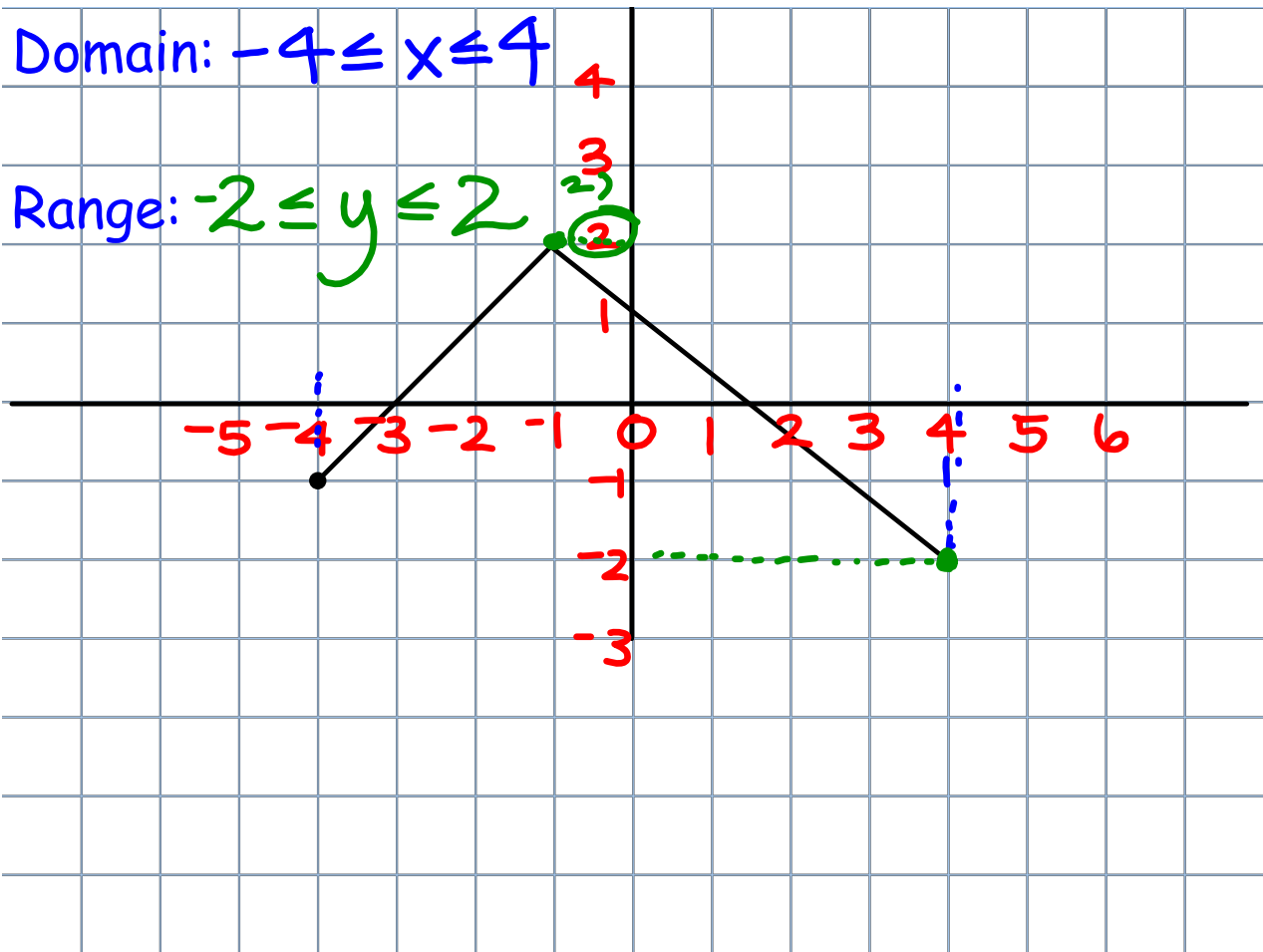
$\text{bottom } y \leq y \leq \text{top } y$ or $[\text{bottom } y, \text{top } y]$

*If the graph has an open-dot or does not reach a value, use $<$ instead of \leq or $($ instead of $[\mathbf{}$.

**If the graph doesn't end on the bottom, use $-\infty$. If it doesn't end on the top, use ∞ .

Domain: $-4 \leq x \leq 4$

Range: $-2 \leq y \leq 2$



Domain: $-4 \leq x \leq 5$

Range: $-2 \leq y \leq 4$

