



Set up Cornell Notes

- **Topic:** Linear vs. Nonlinear Functions
- **EQ:**
How do you determine if a relationship is linear given the four representations of a function?



How do you know if a relationship is linear or nonlinear?

- A relationship is **LINEAR** if the **rate of change is constant**
- A relationship is **NONLINEAR** if the **rate of change is NOT constant**

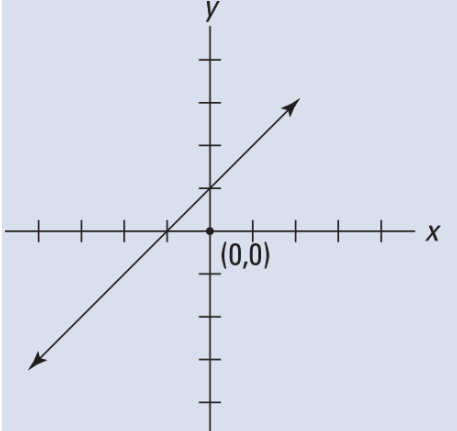
***Remember:**

Rate of Change is the SAME as Slope

How do you know if a relationship is linear or nonlinear?



Four ways to show a function/relationship

Graph EASY	Equation	Table	Word Problem
<p data-bbox="40 839 452 939">Straight line</p> 	<p data-bbox="639 829 846 1115">$y=kx$ or $y=mx$</p> <p data-bbox="587 1200 904 1310">$y=mx + b$</p>	<p data-bbox="967 839 1425 982">Rate of change is constant</p> <p data-bbox="967 1100 1315 1258"><i>Hint: Draw your loops</i></p>	<p data-bbox="1431 1011 1889 1153">Rate of change is constant</p>



How do you label a graph?

- **Input** is the **x-axis**
- **Output** is the **y-axis**

Example: Sara worked at Starbucks for \$8.25 an hour. The relationship between **the number of hours she works** and the amount of **money she makes** is linear/nonlinear?

