CCM8 Unit 9: Identifying Functions Vocabulary

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| **Definitions of Critical Vocabulary and Underlying Concepts**  |
| CBR | calculator-based ranger |
| linear | a graph that forms a line and therefore depicts a constant rate of change  |
| non-linear | a graph that does not form a line and/or does not have a constant rate of change |
| linear relationship | used to describe the relationship between a variable and a constant. Linear relationships can be expressed in a graphical format where the variable and the constant are connected via a straight line or in a mathematical format where the independent variable is multiplied by the slope coefficient, added by a constant, which determines the dependent variable. |
| x-value | the horizontal value in an ordered pair or input |
| function  | a relation that assigns exactly one value in the range to each value in the domain (i.e. the x values do not repeat) |
| function rule | an equation that describes a function |
| function table  | a specific set of values for a given function |
| input | number plugged into a function rule |
| output | the resulting number for a given input  |
| y-value | the vertical value in an ordered pair or output |
| relation | a set of ordered pairs |
| vertical line test | If any vertical line passes through more than one point of the graph, the relation is not a function. |
| linear relationship | (one type of relation)* Constant Relationship between 2 variables
* Graphs are linear – straight lines

4 types of Graphs (Draw all 4 types: vertical, horizontal, upward from left to right, downward from left to right) |
| rate of change | the ratio of a vertical rise that corresponds to a horizontal run The speed at which a variable changes over a specific period of time. Rate of change is often used when speaking about momentum and it can generally be expressed as a ratio between a change in one variable relative to a corresponding change in another. Graphically, the rate of change is represented by the slope of a line. |