

LINEAR Relationships

A relationship between 2 variables

that has a **CONSTANT RATE OF CHANGE:**

Defining features:

The dependent variable increases/decreases by the same amount every time the independent variable increases by 1.

unit rate

Examples:

Non-examples:

Tables

Starting point ↓

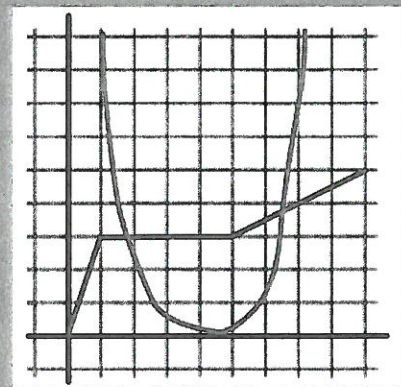
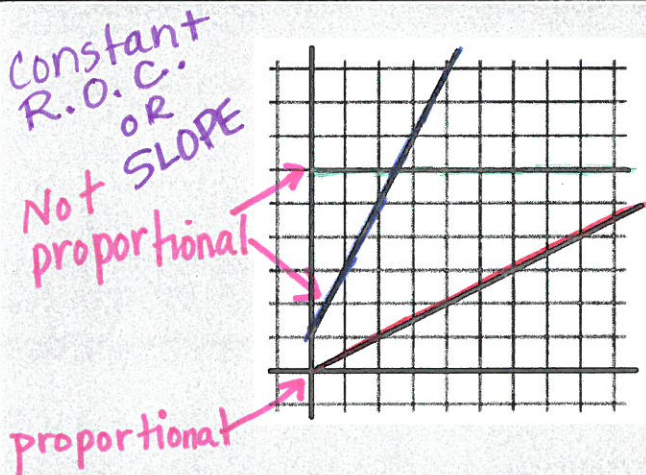
x	y
0	3
1	6
2	9
3	12

Not proportional
Rate of change = 3

x	y
0	5
1	6
2	9
3	15

No constant Rate of change

Graphs



Equations

Dep. variable ↑ y =

- Rate of change
- slope
- unit rate

• x +

- Starting point

Ind. variable ↑

proportional

$d = 2T$

$d = 10$

$y = 5x + 13$

$y = x^2$

$y = \frac{1}{x}$

$y = 2x^2$

No constant R.O.C.

PROPORTIONAL Relationships

Special type of linear relationship that always starts at (0,0).