Linear Relations

**Linear Relation:** Is a mathematical expression that when graphed creates a straight line.

**Independent Variable:** The variable that we control. It is the x co-ordinate. This is the variable that we use substitution most often.

**Dependant Variable:** The variable that changes as we change the value of the independent variable. It is the y co-ordinate.

**Substitution:** Replacing a variable with a number.

**Ex1:** For the following pattern, create a table of values. Next, state the relationship from figure to figure. Graph it. Write a mathematical formula describing this situation.

|  |  |
| --- | --- |
| Figure # | # of boxes |
| 1 | 1 |
| 2 | 4 |
| 3 | 7 |
| 4 | 10 |
| 5 | 13 |
| 6 | 16 |
| 7 | 19 |

Y=mx + b y=3x – 2

Ex2: Create a table of values and graph the following math expression. Y=2x-1

|  |  |
| --- | --- |
| x | Y |
| -1 | -3 y=2(-1) -1 |
| 0 | -1 y=2(0) -1e""....l. |
| 1 | 1 y=2(1) – 1 |