

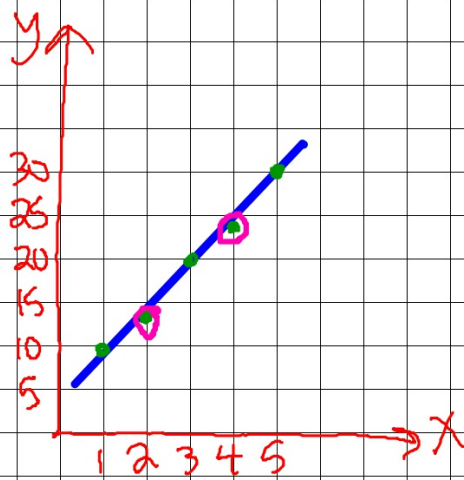
Warm Up

1) Plot the following table on a graph:

x	y
1	10
2	14
3	20
4	24
5	30

→

→



2) Is it linear?

NO

3) What is the slope of the graph?

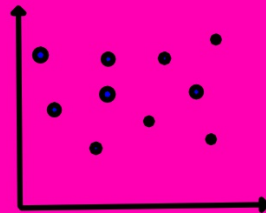
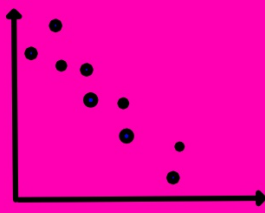
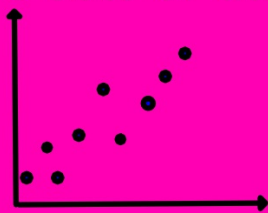
None

4) What is the y-intercept?

0
No

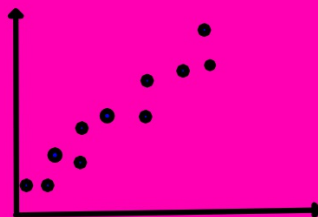
Scatter Plots

A scatter plot show relationships between two sets of data. Correlation describes the type of relationship between the two sets of data.



Positive= both data sets increase or decrease together
Negative= one increases and the other decreases.
No correlation= there is no relationship between the two sets

The line of best fit is the line that comes closest to all the points on a scatterplot.



To draw graphs use

<http://www.onlinemathlearning.com/scatter-plot.html>

Write the examples given in the 2 videos. Then cut and paste the scatter plots in your notebook.

Do video 1: years vs tickets

Do video 2: speed vs distance
games and attendance

Correlation

Directions: For each problem #1-4...

**Plot the points from the table onto the graph given.
What type of correlation does the scatter plot have?
Draw the line of best fit through the data.**

**Cut and paste this worksheet on loose leaf paper to
store in your binder.**

Homework: Copy data, make a scatter plot and draw a line of best fit for the question below.

Amount of time studying (Min)	32	21	40	65	55	38
Test Grade (%)	75	68	80	98	90	79

Warm-up Name the type of correlation in each situation and tell why.

1. The speed of a runner and the number of races she wins.
2. The size of a person and the number of fingers he has.
3. Journal: "Will more people or fewer people buy an item if the price goes up?" Explain the relationship and describe the correlation.

WRITE A FULL PARAGRAPH!!!

To write the linear equation given two or more points

THE CALCULATOR WILL WRITE THE EQUATION FOR YOU

Steps to Follow:

1. STAT
2. ENTER
3. Type the x into L_1 and y into L_2
4. STAT
5. Go Over to CALC
6. 4
7. ENTER (a is the slope and b is the y-intercept)

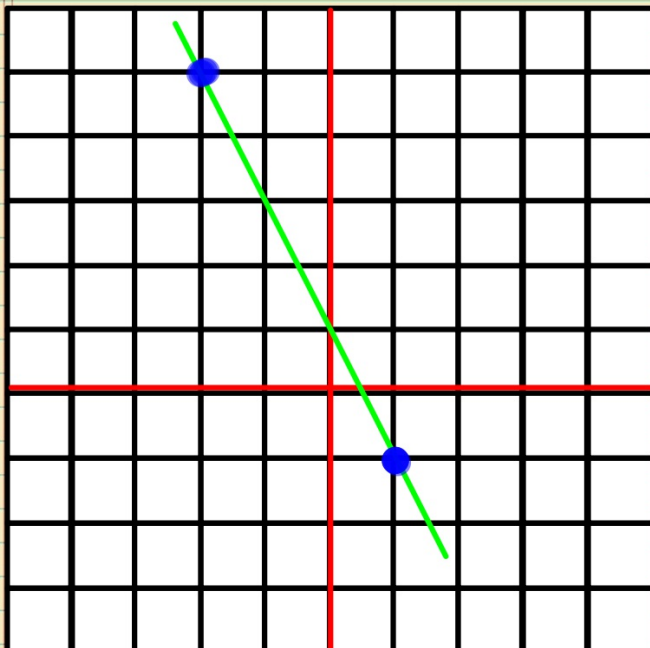
Examples: Write the Linear Equation for each set of numbers

1. $(4, 5)$ and $(3, -2)$

2.

x	y
1	-10
2	-13
3	-16
4	-19

3.



This method also works for scatter plots when you are finding the Line of Best Fit.

x	5	10	18	20	15	30	35	40
y	135	120	105	90	94	56	50	30

STAT, ENTER, L₁, L₂, STAT, CALC, 4 ENTER

y =

Now you determine the line of best fit from the data tables given.

Writing the Line of Best Fit Equation

Directions: For each problem #1-9...

Use the calculator applications to find the equation for the line of best fit.

Calculator Steps:

Stat, Edit,
enter "x" values in L_1
enter "y" values in L_2
Stat, Calc, LinReg (#4)
Calculate, Enter

Calculator Activity

Write the Linear equation in Slope Intercept Form
(solve for y)

$$y = -2x + 2$$

TO GRAPH

1. Go to y= and clear it out
2. Type in your equation
3. Graph
4. Change window if needed
5. Trace your graph

TO FIND X AND Y-INTERCEPTS

1. 2nd graph
2. When $x = 0$ $y =$
3. When $y = 0$ $x =$