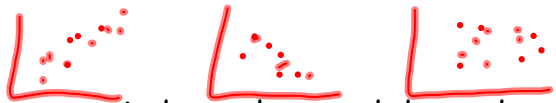# EXAM/EQAO REVIEW

1. Determine the slope and y-intercept of the line:
   $8x + 2y - 4 = 0$

2. Determine the equation of the line that passes through point Q(6, 9) with a slope of $\frac{-3}{4}$
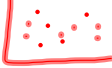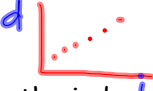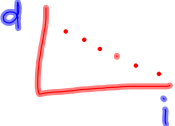
Learning Goals

1. To understand that 3 types of relationships exist in a scatter plot: positive, negative, none.

2. To understand the difference between independent and dependent.

3. To understand the difference between discrete and continuous data.

4. To put the correct variable on the correct axis.

5. To be able to identify the proper relationship between two variables.

<u>**6.1 - Interpreting Data**</u>

If the data points on the scatter plot seem to follow a predictable pattern, you might suggest that there is a relationship between the variables.

Three relationships are possible:

1. <u>No relationship exists</u> - the data is scattered.

2. <u>A positive relationship exists</u> - as the independent variable increases, the dependent variable increases (i.e. the cluster of data looks like a positive slope). d

3. <u>A negative relationship exists</u> - as the independent variable increases, the dependent variable decreases (i.e. the cluster of data looks like a negative slope). d

<u>Dependent Variable</u> - In a relation, the variable whose value you calculate. This variable depends on the other variable.
↳ on y-axis

<u>Independent Variable</u> - In a relation, the variable whose values you choose.
↳ on x-axis. Usually time

<u>Discrete Data</u> - a set of data that cannot be broken into smaller parts.

<u>Continuous Data</u> - a set of data that can be broken down into smaller and smaller parts and still have meaning.
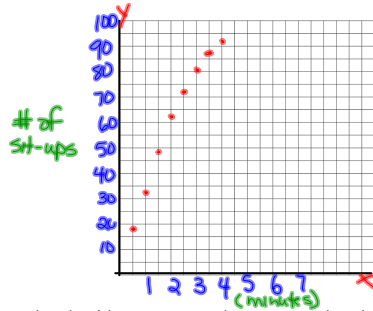
Example One
The table below shows how many sit-ups Tara did in gym class.

Time (min)	0.5	1	1.5	2	2.5	3	3.5	4
Sit-ups Completed	17	33	48	62	72	80	86	91

a) What is the dependent variable? Why?

Sit-ups completed depends on time.

b) What is the independent variable? Time

c) Should you connect the points with a dashed line (for discrete data) or a solid line (continuous data)? Why?

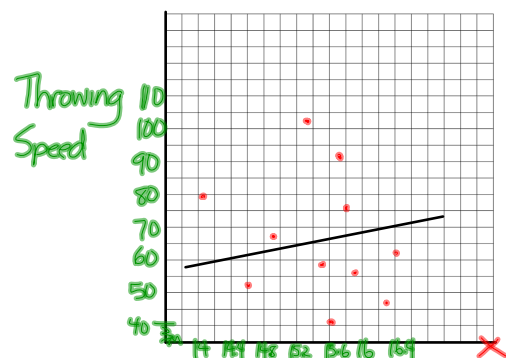Dashed line because you don't consider a part of a sit-up.

d) What relationship exists (positive, negative, or none) exists between completed sit-ups and time?

Positive because as time increases, the # of sit-ups increase.

Example Two
Students in grade 9 and grade 10 are trying out for the junior boys' baseball team at St. Joe's. The speeds of their pitches were measured with a hand-held radar gun and are shown in the table below.

Age (years)	14.1	14.6	14.9	15.3	15.5	15.6	15.7	15.8	15.9	16.3	16.4
Throwing Speed (km/hr)	79.3	50.2	66.1	103.3	62.3	40.4	91.6	75.8	55.9	52.7	62.4

a) What is the dependent variable? Why?

Throwing speed depends on age.

b) What is the independent variable?

age

c) Should you connect the points with a dashed line (for discrete data) or a solid line (continuous data)? Why?

Continuous because decimal speeds + ages make sense.

Discrete = whole #   Continuous = decimal #

d) What relationship exists (positive, negative, or none) exists between completed throwing speed and age?

No relationship exists.

Complete: p. 326 - 328 # 2 - 5.