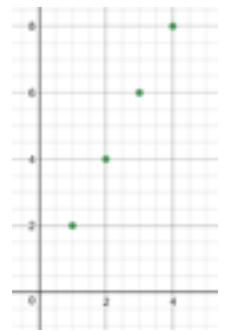Linear relations occur in the world when two things are related in a simple, proportional way. For example the number of tires on one bicycle is 2. If I have four bicycles, I have 8 tires.

Here is a **table of values** showing this proportional relationship

Number of Bicycles	1	2	3	4
Number of tires	2	4	6	8

When a linear relation is graphed, it looks like a straight line. Here is a graph of the relationships above.

Notice for this graph, the variables are **discrete**, so it is a graphed as points that are not

Connected. Discrete variables are items that can be counted. The number of bicycles appears

On the horizontal axis. The number of tires appears on the vertical axis.

To help introduce the concept of **linear relations** in a relevant way, you will investigate wages. This also related to our finance unit and how we can think about saving money.

1.   Choose two different jobs that you might like to do in the next 5 years. The jobs must pay an hourly wage.

Job # 1 Elementary School Teacher   Job # 2 Dental Assistant

2.   Find reliable Canadian internet sources to get information about the 2 jobs:

   •   What is the hourly wage for each job? Make sure they are different.

Job # 1 $27.00   Job # 2 $17.00

Copy and paste the website URL's:

1) http://www1.salary.com/Teacher-Elementary-School-hourly-wages.html

2) http://www1.salary.com/dental-assistant-hourly-wages.html

3.   A) Fill in a table of values for each job.

Number of Hours	Total Pay
0	0
1	27
2	54
3	81
4	108
5	135
6	162
7	189
8	216
9	243
10	270
20	297
40	324
100	351
X (an unknown number of hours)	27x

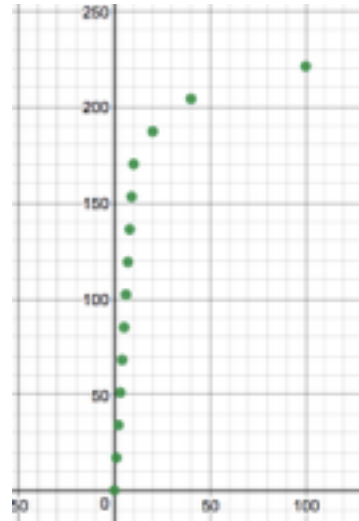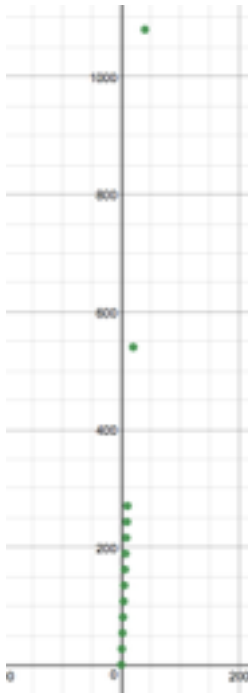| Number of Hours	Total Pay
0	0
1	17
2	34
3	51
4	68
5	85
6	102
7	119
8	136
9	153
10	170
20	187
40	204
100	221
X (an unknown number of hours)	17x

    B) Can you write an equation relating the hours worked (h) and wages earned (W)?

1) 27h=w

2) 17h=w

4.   Graph the two tables on graph paper. (Or if you prefer, use your device or desmos to make a digital graph then screen clip it into your assignment)

2.

1.

5. Which of these two jobs would you prefer to have based on this information and why? What are some other factors to consider when comparing the two jobs?

Elementary school teacher as you will make more, and in the future I hope to have a home and family that I will have to factor in money wise. I will also have to consider hours, if I will have a family as I cant work forever in a day and not come home till my children are sleeping.

6.   You want to save $1,000. Pick one of the jobs. State how many hours a week you could work while going to school. How long will it take to save the money, assuming you have no expenses or taxes to pay?

27h=1000

h=1000 / 27=37.03

7.   Share your findings with your parents/guardians and have a discussion about this assignment. What have you found out that you didn't know before?

That a teacher makes more then a dental assistant.