Practice

1. Does each table of values represent a linear relation? Circle the correct answers.

a) Find the change in each variable.

Time, t	Distance, d
0	8
3	13
6	23
9	38
12	58

The changes in the 1st column are: the same different

The changes in the 2nd column are: the same different

The relation is: linear not linear

b) Find the change in each variable.

Number, n	Cost, C
0	0
4	15
8	30
12	45
16	60

The changes in the 1st column are: the same different

The changes in the 2nd column are: the same different

The relation is: linear not linear

2. Does each table of values represent a linear relation? Circle the correct answers.

a)

Time, t	Volume, V
0	2
2	4
4	6
6	8
8	10

linear not linear

b)

Time, t	Height, h
0	0
10	6
20	11
30	15
40	16

linear not linear

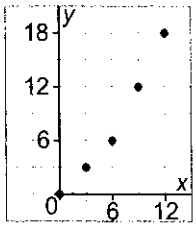
c)

x	y
−2	3
−1	3
0	3
1	3
2	3

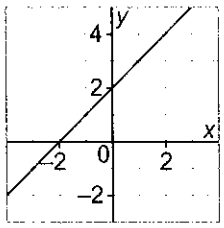
linear not linear

3. Circle each graph that represents a linear relation.

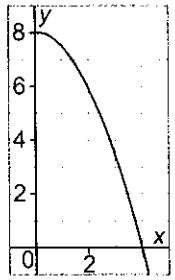
a)



b)



c)



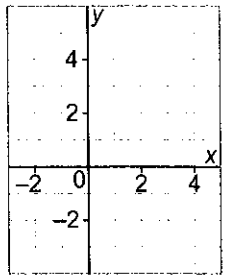
4. Does each equation represent a linear relation?

a) $y = 2x^2 - 3$

Make a table of values.

x	Substitution	y
−2	$2(\quad)^2 - 3 =$	

Plot the points on the grid.



Do the points lie on a straight line? _____

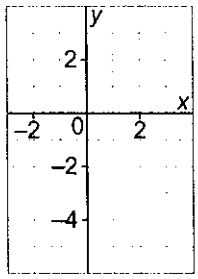
Does $y = 2x^2 - 3$ represent a linear relation? _____

b) $y = 2x - 1$

Make a table of values.

x	y
−2	
−1	

Plot the points on the grid.



Do the points lie on a straight line? _____

Does $y = 2x - 1$ represent a linear relation? _____

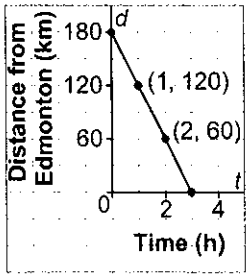
5. This graph shows a car's distance from Edmonton during a journey.

a) Identify the dependent and independent variables.

The dependent variable is plotted on the _____ axis. It is _____, the _____.

The independent variable is plotted on the _____ axis. It is _____, the _____.

Distance from Edmonton



b) Find the rate of change.
What does it mean?

Change in distance from Edmonton:

_____

Change in time:

_____

Rate of change:

$$\frac{\text{change in } \_\_\_\_\_ \text{ variable}}{\text{change in } \_\_\_\_\_ \text{ variable}}$$

Check: The graph goes down to the right, so the rate of change is _____.

$$= \frac{\text{change in } \_\_\_\_\_}{\text{change in } \_\_\_\_\_}$$

$$= \frac{\_\_\_\_\_}{\_\_\_\_\_}$$

$$= \_\_\_\_\_$$

The rate of change is _____. This is _____.
So, every _____, the car is _____ to Edmonton.

6. This graph shows the money raised at a fundraiser.

a) Identify the dependent and independent variables.

b) Find the rate of change.
What does it mean?