6.3 Graphing Relations

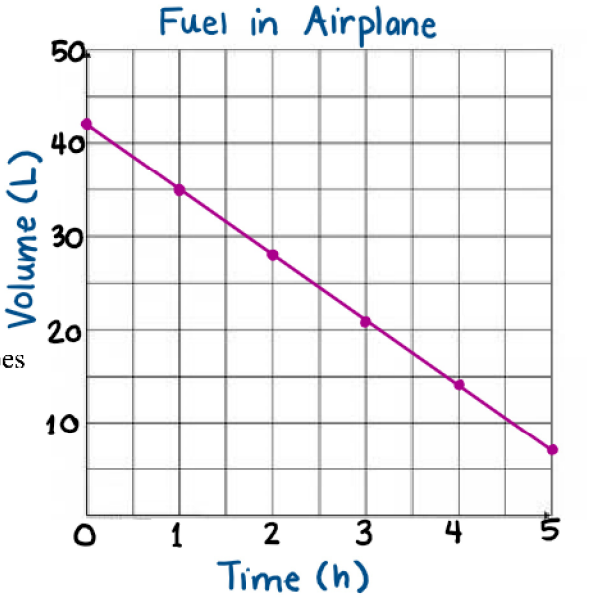
Math 9 **Graphing Linear Relations**

The equation $V = 42 - 7t$ gives the volume, in L, of fuel remaining in a small airplane after t hours of flying.

Create a table of values for the first five hours. Then graph the ordered pairs. Should the points be connected?

Time (h)	Volume (L)
0	42
1	35
2	28
3	21
4	14
5	7

42-7(0)
42-7(1)



What is the initial volume of fuel in the airplane? How does it relate to the equation? How does it relate to the graph?

The initial volume is 42L.
It is the constant / fixed term in the equation.
It is the y-intercept on the graph.

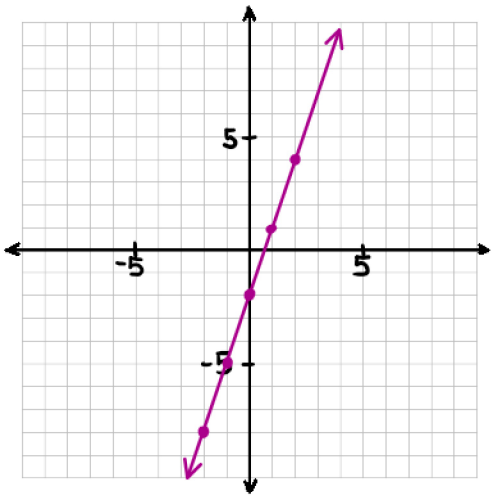
What is the rate of change of the volume of fuel? How does is relate to the equation? How does it relate to the graph?

The rate of change is -7L/h.
It is the coefficient of t.
The graph decreases by 7L for each 1-hour increase in time.

Create a table of values and graph the linear relation $y = 3x - 2$.

x	y
-2	-8
-1	-5
0	-2
1	1
2	4

3(-2)-2
3(-1)-2



Identify the fixed term and the rate of change.

-2 3

Sketch the graph of each relation on the same grid below.

a) $y = 5$

x	y
-4	5
-2	5
0	5
2	5
4	5

b) $x = 6$

x	y
6	-10
6	-7
6	0
6	4
6	8

c) $x = -3$

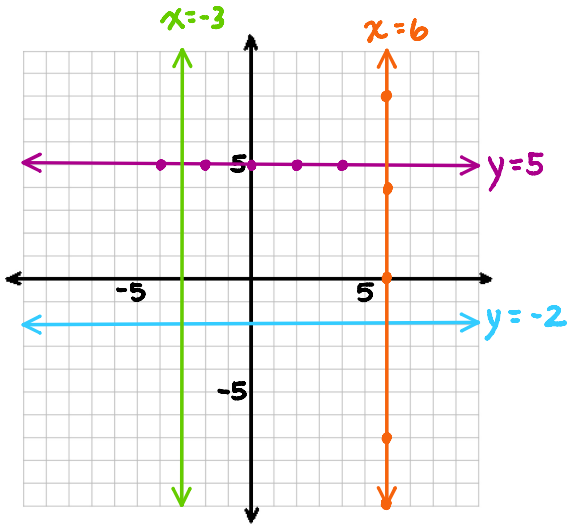
x	y
-3	
-3	
-3	
-3	
-3	

↑ any values

d) $y = -2$

x	y
	-2
	-2
	-2
	-2
	-2

↑ any values



Assignment: handout #2 – 10