

1. Complete the tables below.

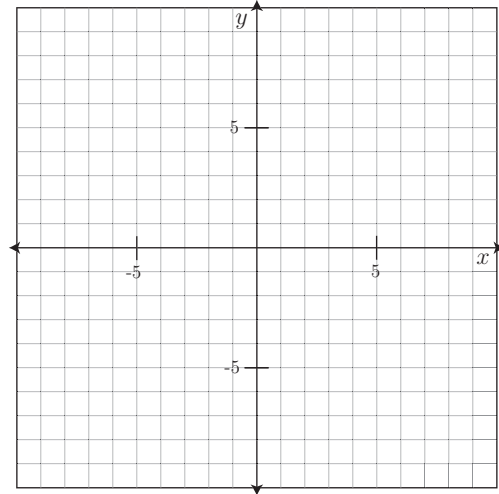
(a)

$x$	-2	-1	0	1	2
$y = x + 4$					

(b)

$x$	-2	-1	0	1	2
$y = 4x$					

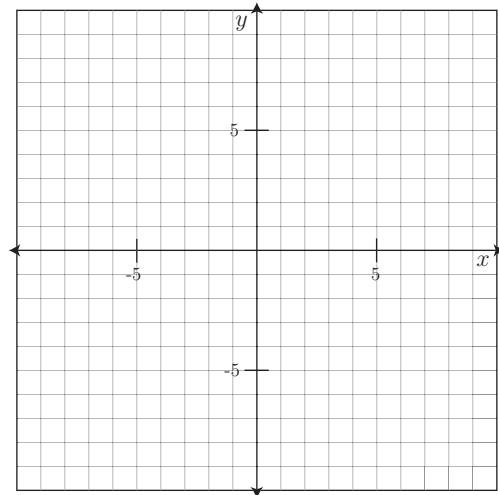
2. Sketch the graphs of 1(a) and (b) on the axes below.



3. Sketch the graphs below on the same axes.

- (a)  $y = x$
- (b)  $y = 2x$
- (c)  $y = 3x$
- (d)  $y = 4x$

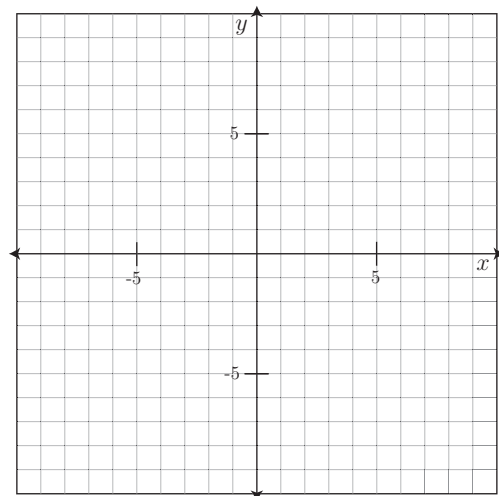
What do you observe about the relationship between the formulas and their graphs?



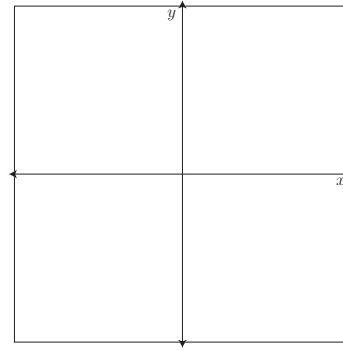
4. Sketch the graphs below on the same axes.

- (a)  $y = x$
- (b)  $y = x + 2$
- (c)  $y = x + 3$
- (d)  $y = x + 4$

What do you observe about the relationship between the formulas and their graphs?



5. Estimate the equation of the line sketched below.



6. Karen earns \$8 per hour working for the BK Lounge. What is her income if she works for...

hours	dollars
1	
2	
3	
4	
⋮	
$t$	

7. Eva drives her car at 70 mph. How far will she have travelled if she drives for...

hours	distance
1	
2	
3	
⋮	
$t$	

8. The tables from question (1) are shown below. Notice that in (a) the increase in  $x$  and the increase in  $y$  are both 1 (a number that doesn't obviously appear in the equation). In (b), however,  $y$  increases by 4 as  $x$  increases by 1. Notice where the 4 shows up in that equation.

(a)

		+1	+1	+1	+1	
$x$	-2	-1	0	1	2	
$y = x + 4$	2	3	4	5	6	
		+1	+1	+1	+1	

(b)

		+1	+1	+1	+1	
$x$	-2	-1	0	1	2	
$y = 4x$	-8	-4	0	4	8	
		+4	+4	+4	+4	

Complete the two tables below and see what you can discover. (Note the input values in the first table and try to understand why those were chosen.)

(c)

$x$	-12	-6	0	6	12
$y = \frac{5}{6}x$					

(d)

$x$	-8	-4	0	4	8
$y = \frac{3}{4}x$					