2.2 #s 1-14, skip #4 and #12

1.

Number of Hexagons	1	2	3
Perimeter	6	10	14

Multiply the number of hexagons by 4 and add 2; $y = 4x + 2$.

Number of Hexagons
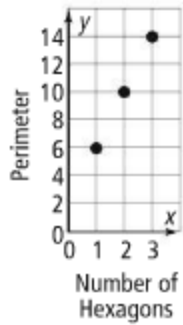
2.

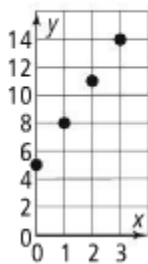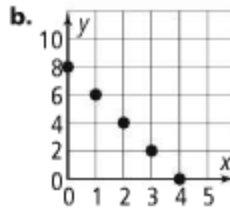| Number of Pentagons	1	2	3
Perimeter	5	8	11

Multiply the number of pentagons by 3 and add 2; $y = 3x + 2$.
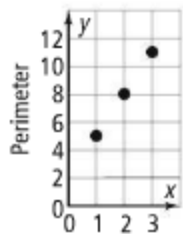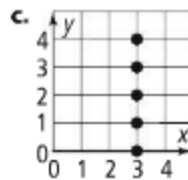

3. Yes; start with 5 and add 3 for each increase of 1 for x; $y = 3x + 5$.

5. a.
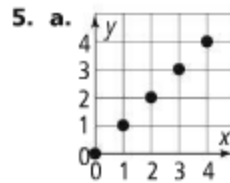
y increases by 1 for each increase of 1 for x.

b.

For each increase of 1 in x, y decreases by 2.

c.

x is 3 for any value of y.

6.

| Number of Squares	1	2	3	4	10	30	n
Perimeter	4	6	8	10	22	62	$2n + 2$

7. independent: number of times you brush your teeth; dependent: amount of toothpaste

8. a and b are functions because for each input there is exactly one output, but c is not a function because there is more than one output value for the input value 3.
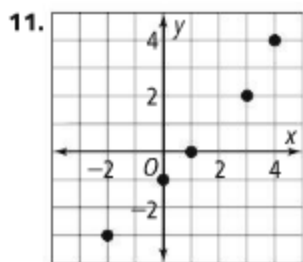
9. No; the graph is not a line.

10. $y = \frac{8}{5}x$, where x is the number of teaspoons of powdered fertilizer and y is the number of gallons of liquid fertilizer. To calculate the powder needed to make a certain volume, use the equation $x = \frac{5}{8}y$.

x	y
0	0
5	8
10	16
15	24
20	32
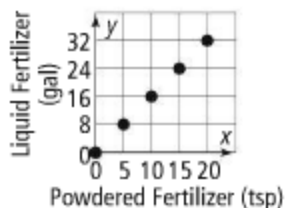
Yes, because there is a unique y for each x.

11.

No; all points are not on a straight line.

13.

Gas Used, x	Distance, y
0	40
1	90
2	140
3	190

$y = 50x + 40$
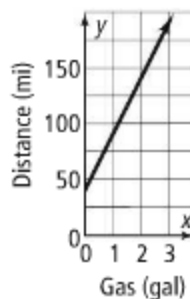
Yes; either distance or gas could be the independent variable, depending on what information is supplied and what is to be calculated.

14. Add 6.