Direct Variation

A **Direct Variation** is a specific relationship in which there is a

constant _____ between all ordered pairs.

**Direct Variation Equations** are written in the form

Finding The Constant (k)	Identify the constant of the ordered pairs below. Then, write the equation to represent the relationship.
1) $\{(1, 4), (2, 8), (3, 12), (4, 16)\}$	2) $\{(-6, 3), (-4, 2), (0, 0), (2, -1)\}$

3)

x	y
-12	-8
-6	-4
0	0
3	2

4)

x	-4	-1	3	5
y	12	3	-9	-15

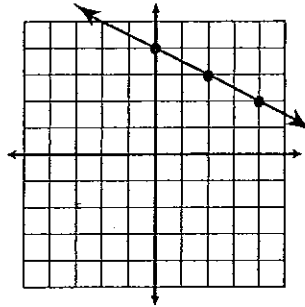| Identifying equations	Identify the equations below that represent a direct variation. If yes, identify the constant of variation.	
5) $y = 3x$	6) $y = -\dfrac{4}{5}x$	7) $y = 2$
8) $2y = 5x$	9) $y = x - 4$	10) $y = -x$
11) $2y = x$	12) $4x + 2y = 6$	13) $5x + y = 0$

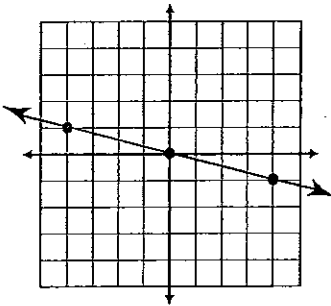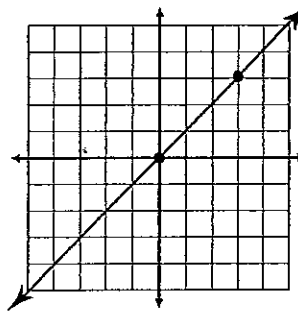| iDentifying graphs	Identify the graphs below that represent a direct variation. If yes, identify the constant of variation.
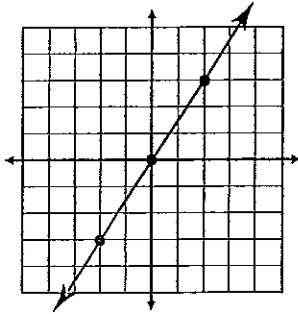
14)	15)
16)	17)

finDing missing values	If the following ordered pairs represent a direct variation, find the missing value.

18) (2, -4) and (-6, y)	19) (4, 16) and (x, 24)
20) (12, y) and (4, 7)	21) (x, -16) and (6, 24)
22) If $y = -18$ when $x = 3$, find x when $y = 30$	23) If $y = 80$ when $x = 32$, find x when $y = 100$
24) If $y = 10$ when $x = -4$, find y when $x = 12$	25) If $y = -7$ when $x = -28$, find y when $x = 20$