

Name:

Date:

Topic:

Class:

Main Ideas/Questions Notes/Examples

DIRECT VARIATION

- A **direct variation** is a specific relationship in which there is a constant _____ between two variables.
- This constant of variation is variable _____.
- **Direct variation equations** are written in the form _____.

Finding the
CONSTANT (K)

Identify the constant of the ordered pairs below. Then, write a direct variation equation to represent the relationship.

1. $\{(1, 4), (2, 8), (3, 12), (4, 16)\}$

2. $\{(-6, 3), (-4, 2), (0, 0), (2, -1)\}$

3.

<i>x</i>	-12	-6	0	3
<i>y</i>	-8	-4	0	2

4.

<i>x</i>	-4	-1	3	5
<i>y</i>	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. $y = -\frac{4}{5}x$

7. $y = 2$

8. $2y = 5x$

9. $y = x - 4$

10. $y = -x$

11. $2y = x$

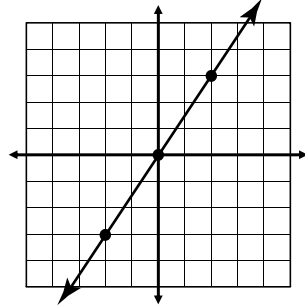
12. $4x + 2y = 6$

13. $5x + y = 0$

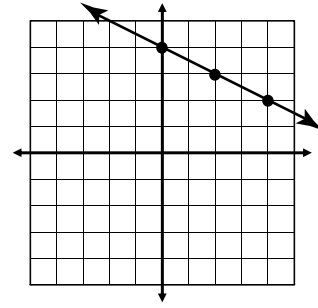
Identifying
GRAPHS

Identify the graphs below that represent a direct variation.
If yes, identify the constant of variation.

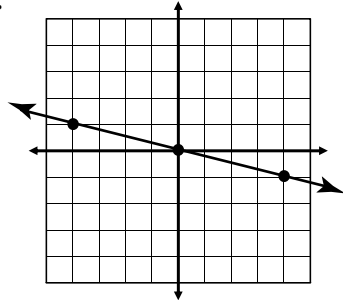
14.



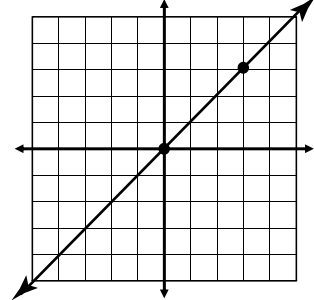
15.



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 $x = 20$.