

Chapter 5 Graphs of Functions

Graph each function on graph paper using the given domain. Draw a separate graph for each function.

1. $y = x + 2$, domain = $\{-1, 0, 3\}$

2. $y = -2x$, domain = $\{-2, 1, 2, 3\}$

See graphs on next page for Answers 1 - 6

3. $y = \frac{1}{2}x - 1$ domain = $\{2 \leq x \leq 10\}$

4. $y = x^2$ domain = $\{-2 \leq x \leq 3\}$

5. $y = 2x - 3$ domain = $\mathbb{R}$

6. $y = -x + 6$ domain = $\mathbb{R}$

Solve for the y-value of the function at the given x-value.

7. $f(x) = 3x - 5$

a. $f(2) = 3(2) - 5 = 1$

b. $f(5) = 3(5) - 5 = 10$

c. $f(-1) = 3(-1) - 5 = -8$

8. $g(x) = -\frac{1}{2}x + 4$

a. $g(6) = -\frac{1}{2}(6) + 4 = 1$

b. $g(-6) = -\frac{1}{2}(-6) + 4 = 7$

c. $g(0) = -\frac{1}{2}(0) + 4 = 4$

$y = kx$	$y = \frac{k}{x}$
Direct	Inverse

Find the constant of variation k and write the function rule.

9. y varies directly with x , and $y = 20$ when $x = 2.5$. $k = 8$

10. y varies directly with x , and $y = 3$ when $x = 18$. $k = 1/6$

11. y varies inversely with x , and $y = 6$ when $x = 4$. $k = 24$

12. y varies inversely with x , and $y = 11$ when $x = 3$. $k = 33$

Use a proportion to solve these direct variation equations. $\frac{y_1}{x_1} = \frac{y_2}{x_2}$

13. If y is directly proportional to x , and $y = 10$ when $x = 2$, what will y equal when $x = 7$? $x = 35$

14. If y is directly proportional to x , and $y = 6$ when $x = 8$, what will y equal when $x = 20$? $x = 15$

15. If y is directly proportional to x , and $y = 25$ when $x = 6$, what will y equal when $x = 18$? $x = 75$

Use equal products to solve these inverse variation equations. $x_1 \cdot y_1 = x_2 \cdot y_2$

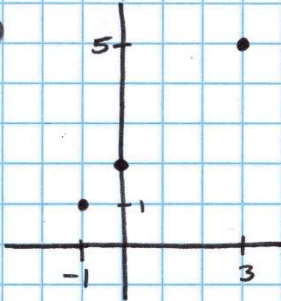
16. If y is inversely proportional to x , and $y = 10$ when $x = 2$, what will y equal when $x = 5$? $x = 4$

17. If y is inversely proportional to x , and $y = 6$ when $x = 3$, what will y equal when $x = 12$? $x = 1.5$

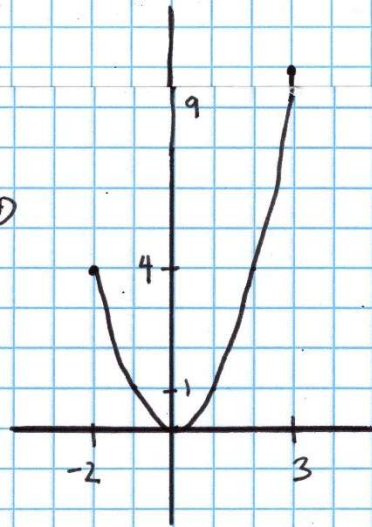
18. If y is inversely proportional to x , and $y = 9$ when $x = 8$, what will y equal when $x = 18$? $x = 4$

Chapter 5 Homework

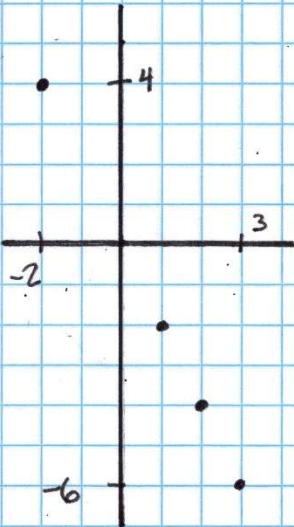
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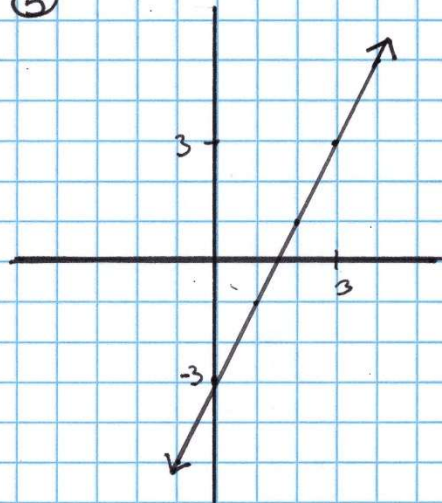
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