

SKILL
80

Skills Readiness

Graph Functions

To graph a function, follow these steps:

Step 1: Make a table of values. If the domain is given, use those x -values. If a domain is not given, choose several values such as -2 , -1 , 0 , 1 , and 2 .

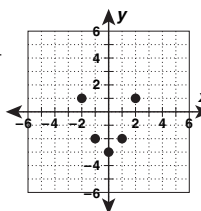
Step 2: Plot the ordered pairs.

Step 3: If a specific domain is not given, draw a line or curve through the points.

Example: Graph $y = x^2 - 3$ for the domain, $D: \{-2, -1, 0, 1, 2\}$.

Note: Since a specific domain is given, do not draw a line through the points.

x	$y = x^2 - 3$	(x, y)
-2	$(-2)^2 - 3 = 4 - 3 = 1$	$(-2, 1)$
-1	$(-1)^2 - 3 = 1 - 3 = -2$	$(-1, -2)$
0	$(0)^2 - 3 = 0 - 3 = -3$	$(0, -3)$
1	$(1)^2 - 3 = 1 - 3 = -2$	$(1, -2)$
2	$(2)^2 - 3 = 4 - 3 = 1$	$(2, 1)$

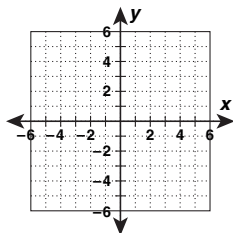


Practice on Your Own

Graph each function for the given domain.

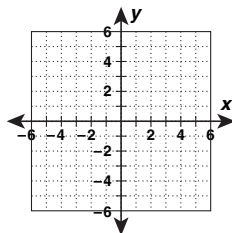
1. $y = -\frac{1}{2}x + 3$

$D: \{-4, -2, 0, 2, 4\}$



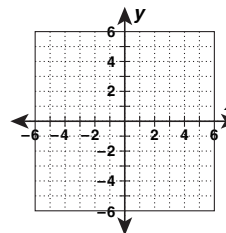
2. $y = x^2 - 2$

$D: \{-2, -1, 0, 1, 2\}$



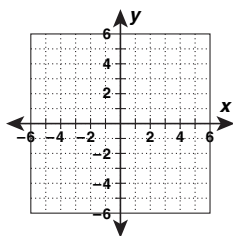
3. $y = (x + 1)^2$

$D: \{-3, -2, -1, 0, 1\}$

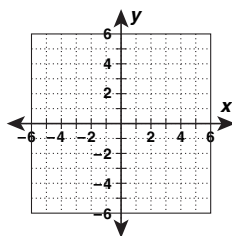


Graph each function.

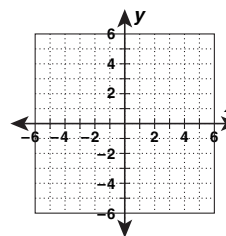
4. $y = x^2 - 5$



5. $y = 2x - 3$



6. $y = (x - 2)^2$

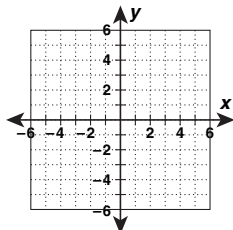


Check

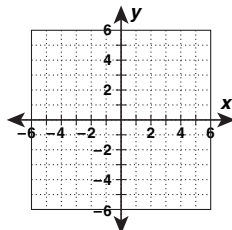
Graph each function. If the domain is given, graph the function for only that domain.

7. $y = \frac{2}{3}x + 1$

$D: \{-6, -3, 0, 3, 6\}$



8. $y = x^2 + 1$



9. $y = (x + 2)^2$

