

Lesson 3-7

Example 1 Graph Real-World Data

TRAVEL The table shows the time spent driving in hours and the corresponding distances traveled in miles. Make a graph of the data to show the relationship between the time and the distance.

Time	Distance
1	60
2	120
3	180
4	240
5	300
6	360

The ordered pairs (1, 60), (2, 120), (3, 180), (4, 240), (5, 300), (6, 360) represent this function. Graph the ordered pairs.

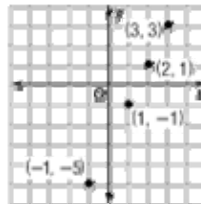
****(INSERT A COMPUTER GENERATED GRAPH OF THIS DATA)****

Example 2 Graph Solutions of Linear Equations

Graph $y = 2x - 3$.

Select any four values for the input x . We chose 3, 2, 1, and -1 . Substitute these values for x to find the output y .

x	$2x - 3$	y	(x, y)
3	$2(3) - 3$	3	(3, 3)
2	$2(2) - 3$	1	(2, 1)
1	$2(1) - 3$	-1	(1, -1)
-1	$2(-1) - 3$	-5	(-1, -5)



Four solutions are (3, 3), (2, 1), (1, -1), and (-1, -5). The graph is shown above at the right.

Example 3 Represent Real-World Functions

SAILING The top speed reached by a sailboat during a race is 6 miles per hour. The equation $d = 6t$ describes the distance d that the sailboat can travel in time t . Represent the function with a graph.

Step 1 Select any four values for t . Select only positive numbers because t represent time. Make a function table.

t	$6t$	d	(t, d)
1	$6(1)$	6	(1, 6)
2	$6(2)$	12	(2, 12)
3	$6(3)$	18	(3, 18)
4	$6(4)$	24	(4, 24)

Step 2 Graph the ordered pairs and draw a line through the points.

