

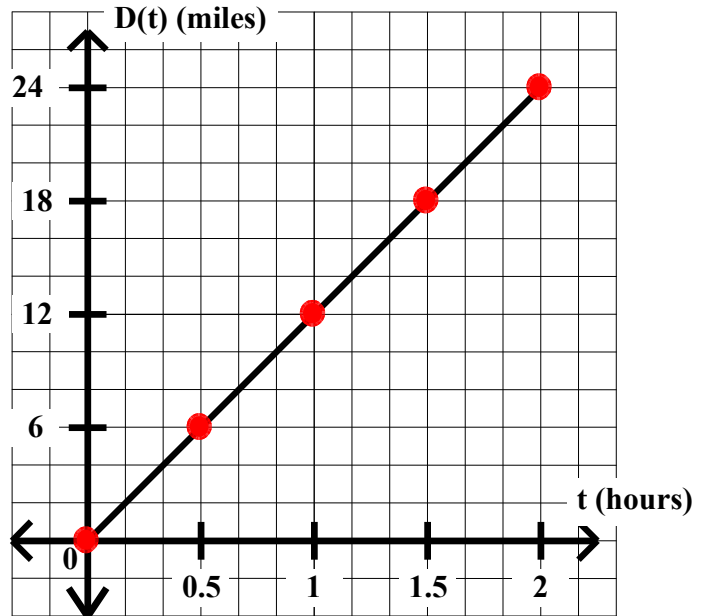
Algebra I Worksheet #5 Unit 8 Selected Solutions

Harry bikes for 2 hours at a constant speed of 12 miles per hour. Let t represent his biking time (in **hours**) and $D(t)$ represent the distance he has gone (in **miles**). Answer each of the following. Show your process neatly organized.

8. Make a table giving t and $D(t)$ every half hour from $t = 0$ to $t = 2$.

t hours	$D(t)$ miles
0	0
0.5	6
1	12
1.5	18
2	24

9. Graph function D .



10. Write an equation giving $D(t)$ in terms of t . $D(t) = 12t$
 distance = (rate)(time)

11. Write an inequality to describe the domain of function D .
 $0 \leq t \leq 2$

12. Write an inequality to describe the range of function D .
 $0 \leq D(t) \leq 24$

13. Evaluate $D(.75)$. What does $D(.75)$ represent in terms of the problem?

$$D(.75) = 12(.75) = \mathbf{9 \text{ miles}}$$

$D(.75)$ represents the distance Harry biked in 0.75 hours.

14. If $D(t) = 18$, then find the value of t . Describe what this value of t represents in terms of the problem.

$$12t = 18$$

$$t = \mathbf{1.5 \text{ hours}}$$

This represents the time it takes Harry to bike 18 miles.