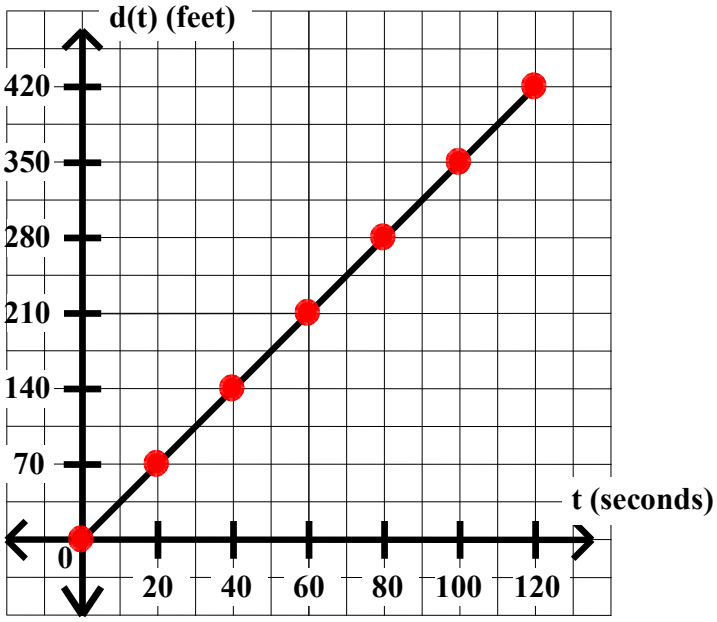
Algebra I Worksheet #6 Unit 8 Selected Solutions

Bill walks for **2 minutes** at a constant speed of **3.5 feet per second**. Let t represent his walking time (in **seconds)** and d(t) represent the distance he has walked (in **feet)**. Answer each of the following. Show your process neatly organized.

1. Make a table giving t and d(t) every 20 seconds from t = 0 to the end of the walk.

t seconds	d(t) feet
0	0
20	70
40	140
60	210
80	280
100	350
120	420

2. Graph function d.



10. Write an equation giving d(t) in terms of t. **$\underline{d(t) = 3.5t}$**

distance = (rate)(time)

11. Write an inequality to describe the domain of function d.

$0 \leq t \leq 120$

12. Write an inequality to describe the range of function d.

$0 \leq d(t) \leq 420$

13. Evaluate d(70). What does d(70) represent in terms of the problem?

d(70) = 3.5(70) = **245 feet**

d(70) represents the distance Bill walks in 70 seconds.

14. If d(t) = 70, then find the value of t. Describe what this value of t represents in terms of the problem.

3.5 t = 70

t = 20 seconds

This represents the time it takes Bill to walk 70 feet.