

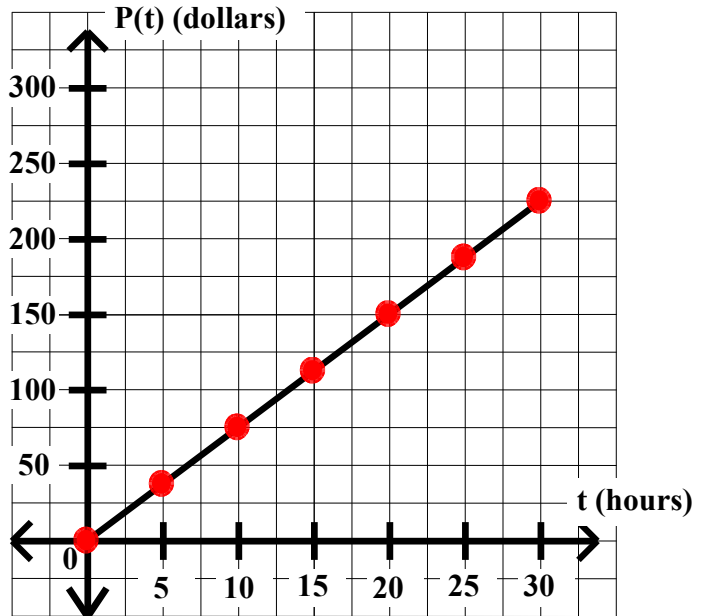
## Algebra I Worksheet #8 Unit 8 Selected Solutions

Mary has a part-time job. She can work up to 30 hours a week. She gets paid \$7.50 per hour. Let  $t$  represent the number of hours she works. Let  $P(t)$  represent her total pay.

1. Make a table giving  $t$  and  $P(t)$  every 5 hours from  $t = 0$  to  $t = 30$ .

$t$ hours	$P(t)$ dollars
0	0
5	37.5
10	75
15	112.5
20	150
25	187.5
30	225

2. Graph function  $P$ .



10. Write an equation giving  $P(t)$  in terms of  $t$ .  
She is paid \$7.50 per hour for  $t$  hours.

$$\underline{P(t) = 7.5t}$$

11. Write an inequality to describe the domain of function  $P$ .

$$\underline{0 \leq t \leq 30}$$

12. Write an inequality to describe the range of function  $P$ .

$$\underline{0 \leq P(t) \leq 225}$$

13. Evaluate  $P(12)$ . What does  $P(12)$  represent in terms of the problem?

$P(12) = (\$7.50)(12) = \mathbf{90 \text{ dollars}}$   
 **$P(12)$  represents the amount of money Mary earns for working 12 hours.**

14. If  $P(t) = 30$ , then find the value of  $t$ . Describe what this value of  $t$  represents in terms of the problem.

$$7.5t = 30$$

$$\underline{t = 4 \text{ hours}}$$

**This represents the time Mary works to earn 30 dollars.**