

Name

3-1B

Lesson Master

Questions on SPUR Objectives  
See pages 178–179 for objectives.

REPRESENTATIONS

Objective E

Suppose you ride your bike to your friend’s house that is 2 miles away. From there you and your friend bike at a rate of 5 miles per hour. Let  $x$  equal the number of hours you ride your bike after getting to your friend’s house and  $y$  equal the total number of miles you ride after  $x$  hours. This situation can be modeled as  $y = 5x + 2$ .

1. Complete the table at the right.

$x$	$y$
0	
1	
2	
3	
4	

2. After how many hours will you have traveled 12 miles?
- 
3. How many miles have you traveled in 4 hours?
- 
4. What do the coordinates  $(0, 2)$  represent?
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A pool that holds 1,410 gallons of water is emptied for the winter. It empties at a rate of 6 gallons per minute. Let  $x$  equal the number of minutes and  $y$  equal the amount of water left after  $x$  minutes. The situation can be modeled as  $y = 1,410 - 6x$ .

5. Complete the table at the right.

$x$	$y$
0	
30	
60	
90	
120	

6. After how many minutes will the pool be about half full?
- 
7. How long will it take to empty the pool?
-

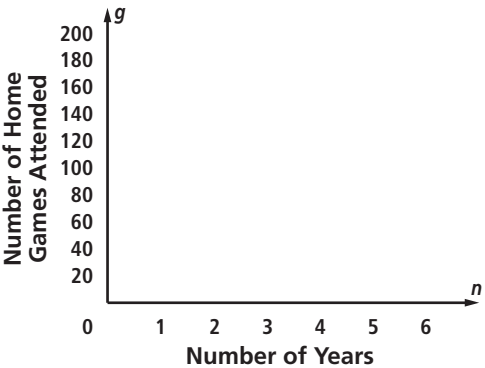
Name

8. What do the coordinates  $(235, 0)$  represent?
9. Write the domain of  $x$  using set builder notation.

Abigail loves basketball. She has already attended 100 Chicago Bulls home games. She plans on attending 8 home games a year. Let  $n$  equal the number of years and  $g$  equal the number of games she attends after  $n$  years.

10. Write an equation that represents  $g$  in terms of  $n$ .
11. Complete the table.
12. Graph the ordered pairs  $(n, g)$ .

$n$	$g$
0	
1	
2	
3	
4	

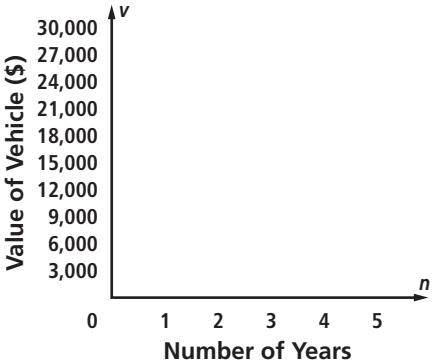


13. If Abigail is 16 years old now, how many home games will she have seen by the time she is 21?

Miguel's family purchased a mid-size sport utility vehicle for \$28,165 four years ago. Its value has depreciated an average of \$4,900 each year. Let  $n$  equal the number of years and  $v$  equal the value of the vehicle after  $n$  years. We can model this relationship with  $v = 28,165 - 4,900n$ .

14. Complete the table below.
15. Graph the ordered pairs  $(n, v)$ .

$n$	$v$
0	
1	
2	
3	
4	
5	



16. What is the current value of the vehicle?
17. Write the domain of  $n$  using set builder notation.