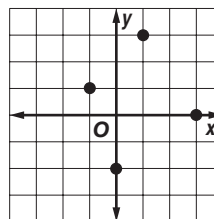


# 3 Chapter 3 Test, Form 1

Write the letter for the correct answer in the blank at the right of each question.

For Questions 1 and 2, use the graph to answer each question.

- What is the domain of the relation?  
 A.  $\{-1, 0, 1, 3\}$       C.  $\{-2, -1, 0, 1, 2, 3\}$   
 B.  $\{-2, 0, 1, 3\}$       D.  $\{0, 1, 2, 3\}$
- What is the range of the relation?  
 F.  $\{-1, 0, 1, 3\}$       H.  $\{-2, -1, 0, 1, 2, 3\}$   
 G.  $\{-2, 0, 1, 3\}$       J.  $\{0, 1, 2, 3\}$

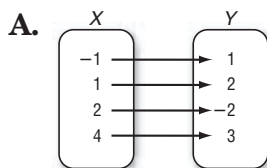


- Where does the graph of  $y = -3x - 18$  intersect the  $x$ -axis?  
 A.  $(0, 6)$       B.  $(0, -6)$       C.  $(6, 0)$       D.  $(-6, 0)$
- Tickets to see a movie cost \$5 for children and \$8 for adults. The equation  $5x + 8y = 80$  represents the number of children ( $x$ ) and adults ( $y$ ) who can see the movie with \$80. If no adults see the movie, how many children can see the movie with \$80?  
 F. 6      G. 10      H. 13      J. 16

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_

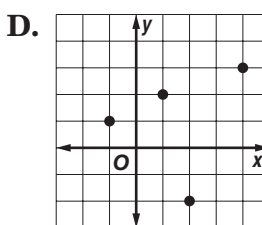
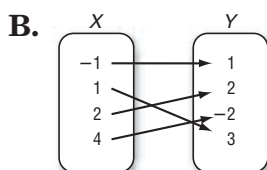
For Questions 5 and 6, use the arithmetic sequence 12, 15, 18, 21, ... .

- Which is an equation for the  $n$ th term of the sequence?  
 A.  $a_n = 3n + 9$       C.  $a_n = 12n + 3$   
 B.  $a_n = 9n + 3$       D.  $a_n = n + 3$
- What is the 12th term in the sequence?  
 F. 38      G. 42      H. 45      J. 48
- Which table, mapping, or graph does *not* show the relation  $\{(-1, 1), (1, 2), (2, -2), (4, 3)\}$ ?



C. 

$x$	-1	1	2	4
$y$	1	2	-2	3



7. \_\_\_\_\_

- What is the inverse of the relation  $\{(0, 1), (1, 0), (3, -4)\}$ ?  
 F.  $\{(0, 0), (1, 1), (3, -4)\}$       H.  $\{(0, 1), (1, 0), (3, -4)\}$   
 G.  $\{(1, 0), (0, 1), (4, -3)\}$       J.  $\{(1, 0), (0, 1), (-4, 3)\}$
- Which relation is not a function?  
 A.  $\{(-3, -1), (0, 0), (3, 1)\}$       C.  $\{(-1, 2), (0, 3), (1, 4)\}$   
 B.  $\{(-1, -3), (0, 0), (1, -3)\}$       D.  $\{(-1, -1), (0, 0), (-1, 1)\}$

8. \_\_\_\_\_  
 9. \_\_\_\_\_

# 3 Chapter 3 Test, Form 1 *(continued)*

For Questions 10 and 11, use the following information. The distance ( $d$ ) a car travels in  $t$  hours is given by the function  $d = 55t$ .

10. Find  $d$  when  $t = 5$ .

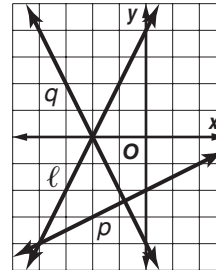
- F. 275                      G. 60                      H. 50                      J. 71                      10. \_\_\_\_\_

11. Write an equation in function notation to describe this relationship.

- A.  $f(t) = 55d$             B.  $f(d) = 55d$             C.  $f(t) = 55t$             D.  $f(d) = 55t$             11. \_\_\_\_\_

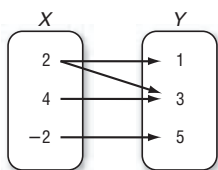
12. Which line shown at the right is the graph of  $y = 2x + 4$ ?

- F.  $\ell$                               H. the  $x$ -axis  
G.  $p$                               J.  $q$



12. \_\_\_\_\_

13. Determine which relation is a function.

- A.             C. 

x	3	4	4	5
y	-1	2	3	6

- B.  $y = \frac{1}{5}x + 2$                       D.  $\{(3, 0), (-2, -2), (7, -2), (-2, 0)\}$                       13. \_\_\_\_\_

14. Determine which relation is a function.

- F.  $\{(1, 1), (1, 2)\}$             G.  $x - 5 = 1$             H.  $y = 9$             J.  $x = 2$             14. \_\_\_\_\_

15. If  $h(r) = \frac{2}{3}r - 6$ , what is the value of  $h(-9)$ ?

- A. 12                      B. 0                      C.  $-6\frac{2}{3}$                       D. -12                      15. \_\_\_\_\_

16. Determine which sequence is an arithmetic sequence.

- F. 3, 6, 12, 24, ...                      H. -7, -3, 1, 5, ...  
G.  $\frac{1}{5}, \frac{1}{7}, \frac{1}{9}, \frac{1}{11}, \dots$                       J.  $-10, 5, -\frac{5}{2}, \frac{5}{4}, \dots$                       16. \_\_\_\_\_

17. Find the next three terms of the arithmetic sequence 5, 9, 13, 17, ... .

- A. 21                      B. 21, 25, 29                      C. 41, 45, 49                      D. 21, 41, 61                      17. \_\_\_\_\_

18. Find the next two numbers of the sequence 1, 2, 4, 8, 16, ... .

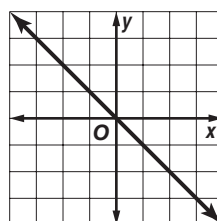
- F. 32, 64                      G. 24, 32                      H. 20, 22                      J. 18, 20                      18. \_\_\_\_\_

19. Which equation is a linear equation?

- A.  $4m^2 = 6$                       B.  $3a + 5b = -3$                       C.  $\frac{2}{3}xy - \frac{3}{4}y = 0$                       D.  $x^2 + y^2 = 0$                       19. \_\_\_\_\_

20. Write an equation in function notation for the relation at the right.

- F.  $f(x) = 2x$                       H.  $f(x) = 1 - x$   
G.  $f(x) = x + 1$                       J.  $f(x) = -x$



20. \_\_\_\_\_

**Bonus** Graph  $y = x - 3$  by using the  $x$ - and  $y$ -intercepts.

**B:** \_\_\_\_\_