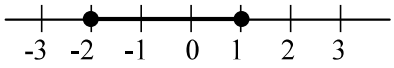
Orientation Exercises 9

1. The diagram represents the graph of what set of numbers?

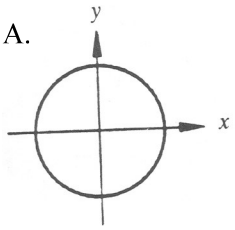


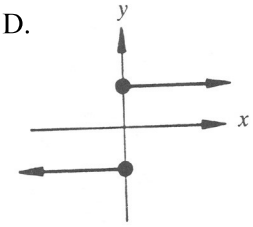
A. {Integers ≥ -2 and ≤ 1}
B. {Numbers > -2 and < 1}
C. {Numbers between -2 and 1}
D. {Integers between -2 and 1, inclusive}
E. {Numbers between -2 and 1, inclusive}

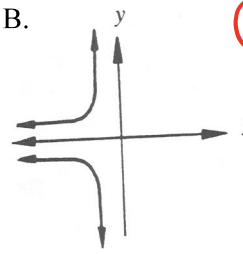
2. Which of the following sets represents a function?

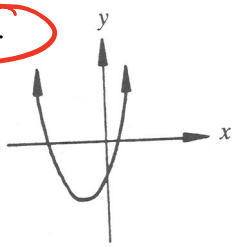
A. {(0, 1), (1, 2), (3, 4), (5, 6), (5, 7)}
B. {(3, 4), (4, 4), (5, 4)}
C. {(1, 3), (5, 2), (1, -3), (5, -2)}
D. {(5, 8), (7, 2), (5, 10)}
E. None of the above

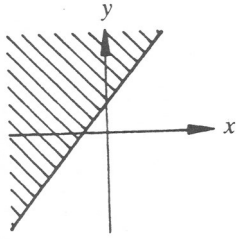
3. Which of the following represents a function?

A.


D.


B.


E.


C.


4. What is the slope of the line joining (-4, 7) and (-5, 0)?

A. 7
B. $\frac{1}{7}$
C. -7
D. $\frac{-9}{7}$
E. $\frac{7}{9}$

$m = \frac{\Delta y}{\Delta x} = \frac{7-0}{-4-(-5)} = \frac{7}{1}$

5. The slope of a horizontal line is:

A. -1
B. 0
C. 1
D. 100
E. No slope

6. How far is the point (-3, -4) from the origin?

A. $2\sqrt{3}$
B. $\sqrt{17}$
C. $\sqrt{22}$
D. 5
E. 7

Pythag Triple 3-4-5

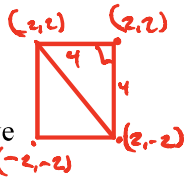
7. The distance from (5, 2) to (1, -1) is:

A. $\sqrt{5}$
B. $\sqrt{17}$
C. 5
D. $\sqrt{37}$
E. 9

$d = \sqrt{(\Delta x)^2 + (\Delta y)^2}$
$= \sqrt{[5-1]^2 + [2-(-1)]^2}$
$= \sqrt{[4]^2 + [3]^2}$
$= \sqrt{16+9}$

8. What is the length of the diagonal of the square whose vertices are R (2, 2), S (2, -2), T (-2, -2), and U (-2, 2)?

A. 4
B. 6
C. 8
D. 10
E. None of the above



$a^2+b^2=c^2$
$16+16=c^2 \rightarrow c=\sqrt{32}$

9. Lines with the same slope are parallel. All of the lines below are parallel except:

A. $y = \frac{1}{3}x$
B. $x - 3y = -6$
C. $x - 3y = 12$
D. $3x - y = 2$
E. $2x - 6y = 0$

$m = 3$
$m = \frac{1}{3}$
$m = \frac{1}{3}$

10. The slope of the line through the points (-3, 4) and (1, -6) is:

A. $-\frac{5}{2}$
B. $\frac{5}{2}$
C. $-\frac{1}{2}$
D. -1
E. 1

$m = \frac{\Delta y}{\Delta x} = \frac{10}{-4} = -\frac{5}{2}$