

Rounding Functions Problem

1. If $[x]$ is the greatest integer less than or equal to x , what is the value of $[-1.6] + [3.4] + [2.7]$?
 - (A) 3
 - (B) 4
 - (C) 5
 - (D) 6
 - (E) 7

2. $[x]$ is the greatest integer less than or equal to the real number x . How many natural numbers n satisfy the equation $[\sqrt{n}] = 17$?
 - A. 17
 - B. 34
 - C. 35
 - D. 36
 - E. 38

3. If $[z]$ denotes the greatest integer less than or equal to z and $[z] = -1$ which of the following statements must be true?
 - A. $z = -1$
 - B. $-2 \leq z < -1$
 - C. $-2 < z \leq -1$
 - D. $-1 \leq z < 0$
 - E. $-1 < z \leq 0$

4. If $[x]$ denotes the least integer greater than or equal to x and $[x/2] = 0$, which of the following could be the value of x ?
 - A. -2
 - B. $-3/2$
 - C. $1/2$
 - D. 1
 - E. 2

5. For all numbers t , let $//t//$ be defined as the greatest integer less than or equal to t . Is $//k//$ evenly divisible by 2?
 - (1) $5 < k < 6$
 - (2) $//k + 2.3// = 7$

6. $[x]$ denotes to be the least integer no less than x . Is $[2d] = 0$?
 - (1) $[d] = 0$
 - (2) $[3d] = 0$

7. If $[x]$ denotes the greatest integer less than or equal to x , is $[x] = 0$?

(1) $5x + 1 = 3 + 2x$

(2) $0 < x < 1$

8. For all z , $[z]$ denotes the least integer greater than or equal to z . Is $[x] = 0$?

(1) $-1 < x < -0.1$

(2) $[x + 0.5] = 1$

9. If $[x]$ denotes the least integer greater than or equal to x , is $[x] = 0$?

(1) $-1 < x < 1$

(2) $x < 0$

10. $[y]$ denotes the greatest integer less than or equal to y . Is $d < 1$?

(1) $d = y - [y]$

(2) $[d] = 0$

11. $[x]$ denotes the greatest integer less than or equal to x . What is the value of $[x]$?

(1) $[3x] = 1$

(2) $[2x+1] = 2$