

งาน 21 ข้อ เรื่อง integer properties (sec 1)

1.

On a number line, the distance from A to B is 4 and the distance from B to C is 5.

Quantity A

The distance from A to C

Quantity B

9

2.

w , x , y , and z are consecutive odd integers such that $w < x < y < z$. Which of the following statements must be true?

Indicate all such statements.

$wxyz$ is odd

$w + x + y + z$ is odd

$w + z = x + y$

3.

Quantity A

The least odd number greater than or equal
to 5!

Quantity B

The greatest even number less than or equal
to 6!

4.

$$ab > 0$$
$$bc < 0$$

Quantity A

$$ac$$

Quantity B

$$0$$

5.

p and w are single-digit prime numbers

$$p + w < 6$$

p^2 is odd

Quantity A

3

Quantity B

w

6.

If x is odd, all of the following must be odd EXCEPT:

(A) $x^2 + 4x + 6$

(B) $x^3 + 5x + 3$

(C) $x^4 + 6x + 7$

(D) $x^5 + 7x + 1$

(E) $x^6 + 8x + 4$

7.

The positive integer a is divisible by 2, and $0 < ab < 1$

Quantity A

b

Quantity B

$\frac{1}{2}$

8.

The sum of four consecutive integers is -2

Quantity A

The smallest of the four integers

Quantity B

-2

9.

If n is the smallest of three consecutive positive integers, which of the following must be true?

- (A) n is divisible by 3
- (B) n is even
- (C) n is odd
- (D) $(n)(n + 2)$ is even
- (E) $n(n + 1)(n + 2)$ is divisible by 3

10.

The average of 11 integers is 35. What is the sum of all the integers?

11.

p is the sum of all the integers from 1 to 150, inclusive. q is the sum of all the integers from 1 to 148, inclusive. What is the value of $p - q$?

12.

$x = 2y = 4z$ and $x, y,$ and z are integers

Quantity A

The average of x and $2y$

Quantity B

$4z + x - 2y$

13.

x is even, \sqrt{x} is a prime number, and $x + y = 11$

Quantity A

x

Quantity B

y

14.

x , y , and z are integers

$$xyz \geq 0$$

$$yz < 0$$

$$y < 0$$

Quantity A

x

Quantity B

z

15.

If $4^6 25^5 = 10^x + k$, and x is an integer, what is the minimum positive value k could be?

- (A) 0
- (B) 30,000
- (C) 30,000,000
- (D) 10,000,000,000
- (E) 30,000,000,000

16.

Jose is making a necklace with beads in a repeating pattern of blue, red, green, orange, purple. If the 1st bead is blue, what color will the 234th bead be?

- (A) blue
- (B) red
- (C) green
- (D) orange
- (E) purple

17.

The product of integers f , g , and h is even and the product of integers f and g is odd

Quantity A

The remainder when f is divided by 2

Quantity B

The remainder when h is divided by 2

18.

$abcd$ is even and positive, and abc is odd and positive

Quantity A

1

Quantity B

d

19.

\sqrt{xy} is a prime number, xy is even, and $x > 4y > 0$

Quantity A

y

Quantity B

1

20.

a , b , and c are positive even integers such that $8 > a > b > c$

Quantity A

The range of a , b , and c

Quantity B

The average of a , b , and c

21.

a , b , and c are integers such that $a < b < c$

Quantity A

$$\frac{a+b+c}{3}$$

Quantity B

$$b$$