Topic: Consecutive integers

Question: Choose the group of consecutive integers.

Answer choices:

A $3, 5, 7$

B $-3, -2, -1$

C $2, 4, 6$

D $5, 10, 15$

Solution: B

Consecutive integers are whole numbers that are one unit apart from each other.

Topic: Consecutive integers

Question: What are two consecutive integers whose sum is 45?

Answer choices:

A $22, 23$

B $21, 24$

C $20, 25$

D $19, 26$

Solution: A

Consecutive integers are whole numbers that are one unit apart from each other. Which means two consecutive numbers are x and $x + 1$. Therefore, we can set up the equation.

$$x + (x + 1) = 45$$

$$x + x + 1 = 45$$

$$2x + 1 = 45$$

$$2x = 44$$

$$x = 22$$

With $x = 22$, that means $x + 1$ is $22 + 1 = 23$. The two consecutive integers are 22 and 23. To double-check, $22 + 23 = 45$.

Topic: Consecutive integers

Question: There are three consecutive integers. The sum of the first two integers is 10 more than the third integer. What is the third integer?

Answer choices:

A 11

B 13

C 15

D 17

Solution: B

Because the integers are all consecutive, it means they are three numbers like $3, 4, 5$ or $7, 8, 9$. Therefore, each integer is one more than the last which means we could represent the three integers as

First integer	x
Second integer	$x + 1$
Third integer	$x + 2$

The sum of the first two integers is

$$x + x + 1$$

$$2x + 1$$

10 more than the third integer is

$$x + 2 + 10$$

$$x + 12$$

Setting those two quantities equal to one another gives

$$2x + 1 = x + 12$$

Subtract x from both sides.

$$x + 1 = 12$$

Subtract 1 from both sides.

$$x = 11$$

The third integer is therefore

$$x + 2$$

$$11 + 2$$

$$13$$