

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

$$x + 2$$

$$11 + 2$$

$$13$$

