Topic: 2-step problems

Question: If $x + 5 = 10$, what is $x + 3$?

Answer choices:

A 8

B 10

C 5

D 13

Solution: A

First, we'll solve the equation $x + 5 = 10$ to find the value of x.

$$x + 5 = 10$$

$$x + 5 - 5 = 10 - 5$$

$$x = 5$$

Now we'll take the value we found for x and plug it into the expression $x + 3$ to answer the question we've been asked.

$$x + 3$$

$$5 + 3$$

$$8$$

Topic: 2-step problems

Question: If $6(2x - 5) = 54$, what is $3x - 4$?

Answer choices:

A 25

B 17

C 24

D 19

Solution: B

First, we'll solve the equation $6(2x - 5) = 54$ to find the value of x.

$$6(2x - 5) = 54$$

$$12x - 30 = 54$$

$$12x = 84$$

$$x = 7$$

Now we'll take the value we found for x and plug it into the expression $3x - 4$ to answer the question we've been asked.

$$3x - 4$$

$$3(7) - 4$$

$$21 - 4$$

$$17$$

Topic: 2-step problems

Question: If $9t - 4 = 3 - 5t$, then what is the value of $12t^2 + 2$?

Answer choices:

A 5

B 6

C 8

D 10

Solution: A

First, solve $9t - 4 = 3 - 5t$.

$$14t - 4 = 3$$

$$14t = 7$$

$$t = \frac{1}{2}$$

Second, substitute $t = 1/2$ into $12t^2 + 2$.

$$12\left(\frac{1}{2}\right)^2 + 2$$

$$12\left(\frac{1}{4}\right) + 2$$

$$3 + 2 = 5$$