Topic: Evaluating expressions

Question: Use the given values to evaluate the expression, if $a = 3$ and $b = -6$.

$$a + b$$

Answer choices:

A -3

B -2

C -6

D -1

Solution: A

We'll plug the given values of a and b into the expression, and then simplify.

$$a + b$$

$$3 + (-6)$$

$$3 - 6$$

$$-3$$

Topic: Evaluating expressions

Question: Evaluate the expression if $x = -1$, $y = 2$, and $z = -3$.

$$xy + y^2 + xyz$$

Answer choices:

A -2

B 8

C 3

D 1

Solution: B

We've been given the values of x, y and z, so we'll just plug them into the expression to find its value.

$$xy + y^2 + xyz$$

$$(-1)(2) + (2)^2 + (-1)(2)(-3)$$

First, the exponent.

$$(-1)(2) + 4 + (-1)(2)(-3)$$

Do the multiplication, from left to right.

$$-2 + 4 + (-1)(2)(-3)$$

$$-2 + 4 + (-2)(-3)$$

$$-2 + 4 + 6$$

Do the addition and subtraction, from left to right.

$$2 + 6$$

$$8$$

Topic: Evaluating expressions

Question: Use $a = -2$ and $b = 3$ to evaluate the expression.

$$ab^2 - b(a - b) + a$$

Answer choices:

A -4

B 5

C -3

D -5

Solution: D

We've been given the values of a and b, so we'll just plug them into the expression to find its value.

$$ab^2 - b(a - b) + a$$

$$(-2)(3)^2 - (3)\big[(-2) - (3)\big] + (-2)$$

$$(-2)(9) - (3)(-5) + (-2)$$

$$-18 + 15 - 2$$

$$-5$$