

Topic: Evaluating expressions

Question: 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.

$$xy + y^2 + xyz$$

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

Simplify the exponent first.

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

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.

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

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

Simplify parentheses first.

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

$$(-2)(3)^2 - (3)[-5] + (-2)$$

Simplify exponents.

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

Perform multiplication from left to right.

$$-18 + 15 - 2$$

Perform addition and subtraction from left to right.

$$-5$$

