



Learning Objective: To use order of operations to simplify expressions

BODMAS

Bracket, Order, Division, Multiplication,
Addition, and Subtraction

PEMDAS

Parentheses, Exponents,
Multiplication, Division, Addition,
and Subtraction

When simplifying expressions, you should follow the rules for order of operations. Some people use **BODMAS** or **PEMDAS**.

$$(5a - 2a) + 2b \times b - 3a + a$$

Brackets _____ $3a + 2b \times b - 3a + a$

Multiplication or Division _____ $3a + 2b^2 - 3a + a$

Addition and / or subtraction _____ $2b^2 + a$

$$(5a - 2a) + 2b \times b - 3a + a = 2b^2 + a$$

Use the order of operations to simplify the expression.

$$2b - b + 3a \times a$$

=

$$6x + y \times 3x$$

=

$$(5y + 16y) \div 3$$

=

$$c - 5c \times 7$$

=

$$(d - 3d) \times 5$$

=

Complete the questions below.

Use the order of operations to simplify the expression.

$$(18y - 6y) \times 3$$

Use the order of operations to simplify the expression.

$$6c - c + 5a \times 2a$$

Use the order of operations to simplify the expression.

$$2x - 5x + 10x \times 5$$

Use the order of operations to simplify the expression.

$$(35g + 15g) \div 5$$



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$$(5a - 2a) + 2b \times b - 3a + a$$

Brackets $\underline{\hspace{2cm}}$ $3a + 2b \times b - 3a + a$

Multiplication or Division $\underline{\hspace{2cm}}$ $3a + 2b^2 - 3a + a$

Addition and / or subtraction $\underline{\hspace{2cm}}$ $2b^2 + a$

$$(5a - 2a) + 2b \times b - 3a + a = 2b^2 + a$$

Use the order of operations to simplify the expression.

$$2b - b + 3a \times a$$

=

$$b + 3a^2$$

$$6x + y \times 3x$$

=

$$6x + 3xy$$

$$(5y + 16y) \div 3$$

=

$$7y$$

$$c - 5c \times 7$$

=

$$-34c$$

$$(d - 3d) \times 5$$

=

$$-10d$$

Complete the questions below.

Use the order of operations to simplify the expression.

$$(18y - 6y) \times 3$$

$$(18y - 6y) \times 3 = (12y) \times 3 \\ = 36y$$

Use the order of operations to simplify the expression.

$$6c - c + 5a \times 2a$$

$$6c - c + 5a \times 2a = 5c + 10a^2$$

Use the order of operations to simplify the expression.

$$2x - 5x + 10x \times 5$$

$$2x - 5x + 10x \times 5 = -3x + 50x \\ = 47x$$

Use the order of operations to simplify the expression.

$$(35g + 15g) \div 5$$

$$(35g + 15g) \div 5 = (50g) \div 5 \\ = 10g$$