AIS Learning

O/L Mathematics
Practice Tutorial

Lesson 03: Fundamentals of Algebra

1. Basic Algebraic Expressions:
    a. Simplify the expression: $3x+2y-5x+y$.
    b. If $a=2$ and $b=4$, evaluate $3a-2b$.

2. Solving Linear Equations:
    a. Solve for x in the equation $4x-7=5$.
    b. Check the solution by substituting the value back into the original equation.

3. Word Problems with Equations:
    a. Translate the following sentence into an algebraic equation: "Twice a number plus five is equal to seventeen."
    b. Solve the equation from part (a) to find the number.

4. Factoring:
    a. Factor the quadratic expression: $x2-4$.
    b. Solve the equation.
    $x2-4=0$ to find the values of x.

5. Solving Systems of Equations:
    a. Solve the system of equations:
    $2x+y=5$
    $x-3y=10$

6. Inequalities:
    a. Solve the inequality: $2x+3>7$.
    b. Graph the solution on a number line.

7. Exponents and Powers:

a. Simplify

$2^4 \times 2^{-2}$

b. Express

8 as a power of 2.

8. Polynomial Operations:

    a. Add the polynomials:

    $3x^2+2x-4$ and $5x^2-x+7$.

    b. Multiply the polynomials:

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

9. Rational Expressions:

    a. Simplify the expression:

    b. Identify any excluded values.

10. Quadratic Equations:

    a. Solve the quadratic equation.

    $x^2-6x+9=0$.

    b. State the nature of the solutions.

Try those questions by yourself and submit your answers to us.
We can evaluate it for you!!!!
Happy Learning!!!!

-Evaluation Team AIS Learning