Arithmetic Calculator Algorithm:

1. *Start:*

2. Display a welcome message for the calculator.

3. Initialize variables for the first operand, operator, and second operand.

4. Prompt the user to enter the first operand.

5. Read and store the first operand.

6. Prompt the user to enter the operator (+, -, *, /).

7. Read and store the operator.

8. Prompt the user to enter the second operand.

9. Read and store the second operand.

10. Perform the arithmetic operation based on the operator.

11. Display the result of the calculation.

12. Ask the user if they want to perform another calculation.

13. If yes, go back to step 3.

14. If no, display a goodbye message and end the calculator.

Pseudocode:

plaintext

Start

Display welcome message for the calculator

Repeat:
    Initialize variables for first operand, operator, and second operand

    Prompt user to enter first operand
    Read and store first operand

    Prompt user to enter operator (+, -, *, /)

Read and store operator

Prompt user to enter second operand

Read and store second operand

Perform arithmetic operation based on operator

Display result of calculation

Ask user if they want to perform another calculation (yes/no)

Until user chooses not to continue

Display goodbye message for the calculator

End