

## 4 Function Calculator Algorithm

**Inputs:** (from user or file or wherever)

User provides the operation and two operands

**Outputs:** (text description of what the algorithm will output)

Program outputs the results of the operation.

**Relevant Constants and Formulas:**

**Main Algorithm** (numbered steps)

1. Print welcome message
2. Prompt the user for the operation
3. Perform correct operation
4. Output result to user

**Step Refinements** (provide a refinement for each numbered step that has multiple sub-steps)

Step 3 refinement

Step 3 has four variations, depending on the operation selected by the user.

3A Addition

- 3A.1 prompt the user for the two operands to be added
- 3A.2 return the sum of the two operands

3B Subtraction

- 3B.1 prompt the user for the first operand (Minuend)
- 3B.2 prompt the user for the second operand (Subtrahend)
- 3B.3 return the difference (Minuend - Subtrahend)

3C Multiplication

- 3C.1 prompt the user for the two operands to be multiplied
- 3C.2 return the product of the two

3D Division

- 3D.1 prompt the user for the dividend
- 3D.2 prompt the user for the divisor
- 3D.3 check to ensure the divisor is not 0
- 3D.4 return the quotient of dividend/divisor