FLOWCHARTS (CONT.)

• **Problem 1: - You are working at Toyota Indus Motors and want to assemble a car. Design a flowchart with proper process modules and decision structures to replicate a pipeline**

**True**

S

t

art

Read

Calc

**Until**

**Nothi**

**n**

**g**

**more to**

**assemble**

**Read**

**Getting**

**required**

**Materials for cars**

**Exit**

**Exit**

**Repeat**

**False**

**Assembling them in necessary places**

**Pseudocode**

# **Problem 2: - Take three variables as input and add them without using the + operator (Use your head for this)**

1. START
2. // Input/Output
3. INPUT number1
4. INPUT number2
5. INPUT number3
6. // variables and Initialization
7. SET sum to 0
8. SET subtraction to 0
9. // Process Steps
10. SET subtraction to - number1 - number2 - number3
11. SET sum to - (subtraction)
12. // Conditional Statements
13. IF sum > 0 THEN
14. PRINT “The sum is positive”
15. ELSE
16. PRINT “The sum is non-positive”
17. END

# **Problem 3: - Create a small calculator which only does ‘+’ or ‘-‘ Operations. (Hint: Take three variable inputs with one being used for the operator)**

1. START
2. // Input/Output
3. INPUT number1
4. INPUT number2
5. INPUT operator
6. // variables and Initialization
7. SET sum to 0
8. SET subtraction to 0
9. // Process Steps
10. SET sum to number1 + number2
11. SET subtraction to number1 - number2
12. // Conditional Statements
13. IF operator = ‘+’ THEN
14. PRINT ‘sum’
15. IF ELSE operator = ‘-‘ THEN
16. PRINT ‘subtraction’
17. ELSE
18. PRINT “Invalid”

**ALGORITHM**

# **Problem 1: -Implement an algorithm for determining if an Nth is a divisor of an n Number (i.e. 2 is a divisor of 6). If so, determine if it’s an even number or odd number as well.**

1. Ask the User to enter **Nth number**
2. Ask the user to enter **n number**
3. Set **Division** to **(n/N)**
4. **IF** **Division** is divisible THEN
5. PRINT “It is divisible”
6. **IF** **Division** = odd THEN
7. PRINT “It is odd”
8. **ELSE** **Division** = even THEN
9. PRINT “It is even”
10. **ELSE** **Division** is not divisible THEN
11. PRINT “It is not divisible”
12. Display **Division**

# **Problem 3: - Implement an algorithm for making a simple calculator with all the operators (+,-,\*,/,%)**

1. Ask the user to enter a **number1**
2. Ask the user to enter a **number2**
3. Ask the user to enter an **operator**
4. IF **operator** = ‘+’ THEN
5. Set **Result** to (number1 + number2)
6. IF ELSE **operator** = ‘-’ THEN
7. Set **Result** to (number1 - number2)
8. IF ELSE **operator** = ‘/’ THEN
9. IF **number2** = ‘0’
10. PRINT “Undefined”
11. ELSE
12. Set **Result** to (number1 / number2)
13. IF ELSE **operator** = ‘\*’ THEN
14. Set **Result** to (number1 \* number2)
15. ELSE
16. PRINT “Invalid operator”
17. Display **Result**