**(1)**

**PROGRAM <SUM-NUMBERS>**

READ num1;

READ num2;

SUM = num1 + num2;

PRINT (SUM);

**END PROGRAM**

**(2)**

**PROGRAM <PRINT-NUMBERS>**

NUM = 1;

LOOP (NUM <= 100)

IF (NUM % 2 == 0)

PRINT NUM;

NUM ++;

END\_IF

END\_LOOP

**END PROGRAM**

**(3)**

**PROGRAM <LEAP YEAR>**

READ year;

IF (year % 400 == 0)

PRINT (Leap year);

ELSE IF (year % 100 == 0)

PRINT (Not a Leap year);

ELSE IF (year % 4 == 0)

PRINT (Leap year);

ELSE

PRINT (Not a Leap year);

**END PROGRAM**

**(4)**

**PROGRAM <KMPH-TO-MPH>**

READ km;

Mph = km \* 0.6213721;

PRINT (Mph);

**END PROGRAM**

**(5)**

**PROGRAM <BUZZ-NUMBER>**

READ num;

IF (num % 7 == 0 || num % 10 == 7)

num = BUZZ-NUM;

ELSE

num = NOT-BUZZ;

**END PROGRAM**

**(6)**

**PROGRAM <MULTIPLICATION>**

READ num;

counter = 1;

LOOP (counter <= 10)

Table = num \* counter;

PRINT (num = num x counter = Table);

counter ++;

END\_LOOP

**END PROGRAM**

**(7)**

**PROGRAM <FACTORIAL>**

READ num;

counter = 2;

IF (num == 0 || num == 1)

Factorial = 1;

ELSE

Result = 1;

LOOP (counter <= num)

Result = Result \* counter;

Counter ++;

END\_LOOP

Factorial = Result;

END \_IF

PRINT (Factorial)

**END PROGRAM**

**(8)**

**PROGRAM <PRIME-NUMBER>**

READ num;

Prime = True;

IF (num <= 1)

Prime = False;

ELSE

Counter = num / 2;

LOOP (counter >= 2)

IF (num % counter == 0)

Prime = False;

Break;

END\_IF

Counter --;

END\_LOOP

END\_IF

IF (Prime == True)

PRINT (Prime);

ELSE

PRINT (Not Prime);

END\_IF

**END PROGRAM**

**(9)**

**PROGRAM <MULTIPLICATION>**

READ num;

counter = 1;

LOOP (counter <= 10)

Table = num \* counter;

PRINT (num = num x counter = Table);

counter ++;

END\_LOOP

**END PROGRAM**

**(10)**

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**\*\*\*\***

**\*\*\*\*\***

**PROGRAM <PATTERN>**

Print (\*\n);

Print (\*\*\n);

Print (\*\*\*\n);

Print (\*\*\*\*\n);

Print (\*\*\*\*\*\n);

**END PROGRAM**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PROGRAM <PATTERN-using-loops>**

column = 1;

row = 1;

LOOP (column <= 5)

LOOP (row <= column)

PRINT (\*);

Row ++;

END\_LOOP

PRINT (\n);

Column ++;

END\_LOOP

**END PROGRAM**

**(Bonus)**

**PROGRAM <Palindrome>**

READ num;

reversed = 0;

LOOP (num > 0)

digit = num % 10;

reversed = reversed \* 10 + digit;

num = num / 10;

END\_LOOP

IF (num == reversed) THEN

PRINT (PALINDROME);

ELSE

PRINT (NOT PALINDROME);

END IF

**END PROGRAM**