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**PSEUDOCODE**

1. **Find if number is multiple of 5**

1.start

2 input value =x

3 set remainder =0

4 multiply x \*5

5 if

6 remainder=0 than

7 print “x multiple of 5”

8 else

9 print “x not multiple of 5”

9 end

**2. Check if character is uppercase or lower case**

1 start

2 read input from the user

3 if letter is from A to Z

4 then,

5 print output “uppercase”

6 if letter is a to z

7 then,

8 Print output “lowercase”

9 end

**3. Create a small calculator which only does ‘+’ or ‘\*‘Operations.**

1 start

2 input value a

3 input value b

4 input value c for operator + or \*

5 enter value a

6 enter c

7 Enter value b

8 if operator is + then, print a+b

9 else, if c is \*

10 print a\*b

11 end

**4. Check whether a given number is positive negative or zero**

1 start

2 input value =x

3 set x=0

4 if x>0

5 print “x is positive”

6 if x<0

7 print “x is negative”

8 If x =0

9 Print “x is zero

10 end

**5. Determine if a person is a teenager (between 13 and 19 years old).**

1 start

2 read input value from user

3 set x=0

4 if x>0 then

5 print “positive number”  
6 if x<0 then,

7 print “negative number”

8 else

9 “print x=0”

10 end

**ALGORITHMS**

**1. Implement an algorithm to determine if a given year is a leap year. A leap year is divisible by 4, but not divisible by 100, except if it is also divisible by 400.**

1 Start

2 Input the year.

3 Check if the year is divisible by 400.

4 If true, the year is a leap year.

5 Else, check if the year is divisible by 100.

6 If true, the year is not a leap year.

7 Else, check if the year is divisible by 4.

8 If true, the year is a leap year.

9 Else, the year is not a leap year.

10 End

**2. Implement an algorithm to count the number of occurrences of each character in a given string.**

1 Start

2 Input the string.

3 For each character in the string:

4 check its count

5 print characters count

6 repeat step 4 and 5 with all characters

7 end

**3. Write an algorithm to calculate x raised to the power y (i.e., x y) without using built-in power functions**.

1 start

2input number =x

3 input exponential=y

4 multiply x with x for y times

5 print value

6 end

**4. Calculate the area of a circle given its radius r.**

1 start

2 input number =r

3 set pi =3.142

4 set area = pi \*r\*r

5 Print area

6 end

**5. Find the median of three given numbers**.

1 start

2input =x, y, z

3 arrange inputs in ascending order

4 print 2nd value from this order as median

5 end