**Problem Set – 01 (Basic Problems)**

Problem 1:

Write a program that takes two integers as input and prints their sum.

Sample Input:

5 7

10 15

-3 8

Sample Output:

12

25

5

Problem 2:

Write a program that takes a number as input and prints its square.

Sample Input:

3

-2

9

Sample Output:

9

4

81

Problem 3:

Write a program that takes three floating-point numbers as input and calculates their average.

Sample Input:

4.5 3.2 2.1

-1.5 2.7 6.8

10.5 10.5 10.5

Sample Output:

3.2667

2.6667

10.5000

Problem 4:

Write a program that takes a character as input and checks whether it is a vowel or consonant.

Sample Input:

a

D

e

Sample Output:

Vowel

Consonant

Vowel

Problem 5:

Write a program that takes two integers as input and prints their maximum value.

Sample Input:

10 20

-5 3

8 8

Sample Output:

20

3

8

Problem 6:

Write a program that takes a number as input and checks whether it is positive, negative, or zero.

Sample Input:

5

-7

0

Sample Output:

Positive

Negative

Zero

Problem 7:

Write a program that takes two integers as input and prints their product.

Sample Input:

4 6

-3 5

0 9

Sample Output:

24

-15

0

Problem 8:

Write a program that takes a number as input and checks whether it is even or odd.

Sample Input:

8

-3

12

Sample Output:

Even

Odd

Even

Problem 9:

Write a program that takes a character as input and checks whether it is an alphabet or not.

Sample Input:

a

5

Z

Sample Output:

Alphabet

Not Alphabet

Alphabet

Problem 10:

Write a program that takes two integers as input and checks whether the first number is divisible by the second number.

Sample Input:

12 3

7 4

10 5

Sample Output:

Divisible

Not Divisible

Divisible

Problem 11:

Write a program that takes a number as input and checks whether it is a prime number.

Sample Input:

7

10

13

Sample Output:

Prime

Not Prime

Prime

Problem 12:

Write a program that takes three integers as input and prints their minimum value.

Sample Input:

8 5 10

-2 -7 -3

0 0 0

Sample Output:

5

-7

0

Problem 13:

Write a program that takes a number as input and checks whether it is a palindrome.

Sample Input:

121

345

1221

Sample Output:

Palindrome

Not Palindrome

Palindrome

Problem 14:

Write a program that takes three integers as input and checks whether they form a valid triangle.

Sample Input:

3 4 5

2 2 5

7 2 9

Sample Output:

Valid Triangle

Not a Valid Triangle

Valid Triangle

Problem 15:

Write a program that takes a number as input and checks whether it is a perfect square.

Sample Input:

16

10

25

Sample Output:

Perfect Square

Not a Perfect Square

Perfect Square

Problem 16:

Write a program that takes two integers as input and calculates their

quotient and remainder.

Sample Input:

25 7

-15 4

10 3

Sample Output:

Quotient: 3, Remainder: 4

Quotient: -3, Remainder: -1

Quotient: 3, Remainder: 1

Problem 17:

Write a program that takes a number as input and checks whether it is a leap year.

Sample Input:

2020

2000

1900

Sample Output:

Leap Year

Leap Year

Not a Leap Year

Problem 18:

Write a program that takes two integers as input and calculates their power.

Sample Input:

2 3

-2 4

5 0

Sample Output:

8

16

1

Problem 19:

Write a program that takes three integers as input and checks whether they form an arithmetic progression.

Sample Input:

3 5 7

2 6 10

8 4 0

Sample Output:

Yes

No

Yes

Problem 20:

Write a program that takes a number as input and checks whether it is a perfect number.

Sample Input:

6

12

28

Sample Output:

Perfect Number

Not a Perfect Number

Perfect Number