- ==All programs must be generic. Not hard coded.==

==1. Write a python program to find the volume of a cone. Refer the problem definition given below.==
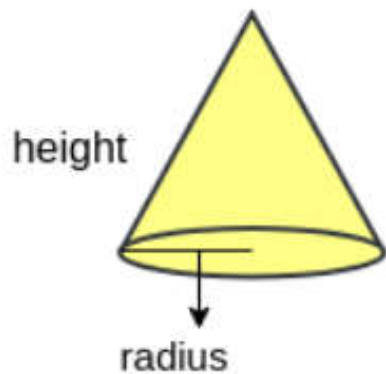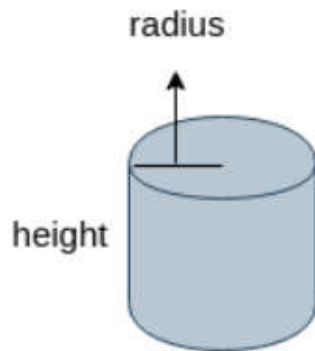

height

radius

Input:

```
Radius = 38, Height = 35, Pie = 3.14
```

Output:

```
Volume = pie * radius * radius * height/3;
       = 3.14 * 38 * 38 * 35/3
       = 48766.666667
```

radius

height

Input:

radius (r) = 38 , height (h) = 35

Output:

Volume of the cylinder = pie * radius^2 * height

= 3.14 * 38* 38 * 35

= 146300.000000

3. Write a python program to convert Celsius into Fahrenheit. Refer the problem definition given below.

Temperature in Fahrenheit = ((celsius * 9) / 5) + 32

Input:

```
celsius= 12
```

Output:

```
Temperature in Fahrenheit = 53.6
```

4. Program to find the simple interest.
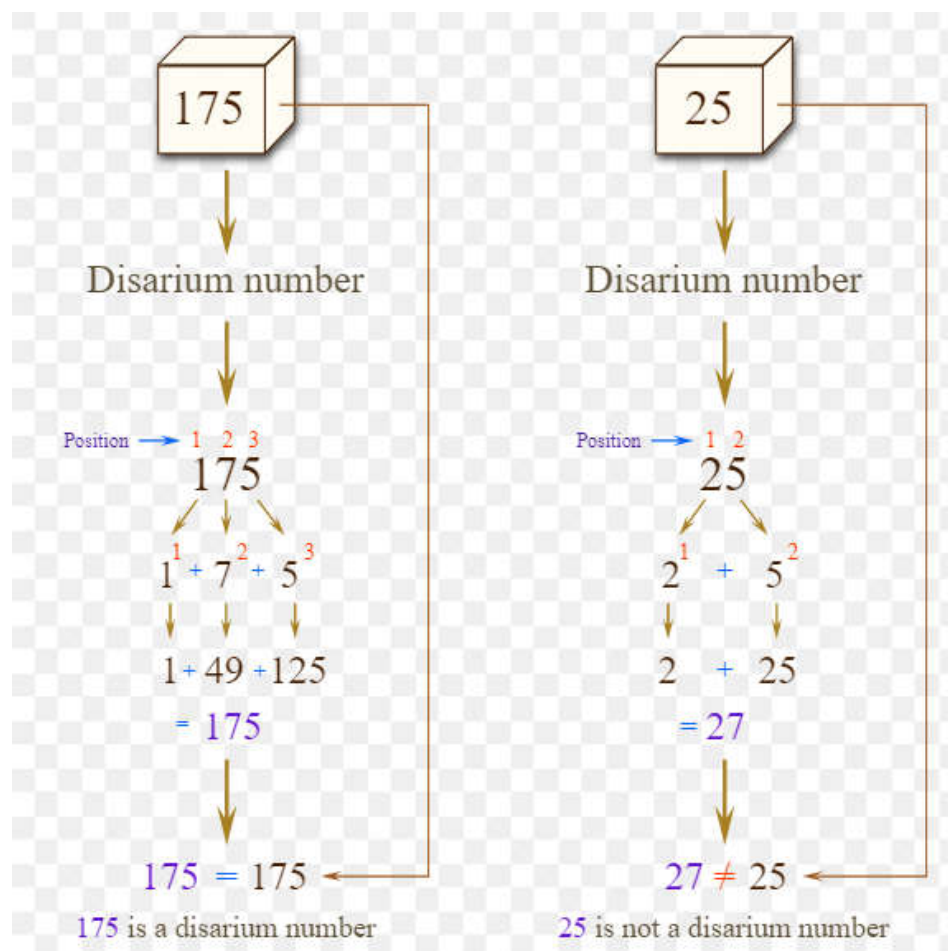
Simple Interest = (P × R × T) / 100

Input:

```
P = 34000, R = 30,T = 5
where P = Principal Amount, R = Rate per Annum, T = Time (years)
```

Output:

```
Simple Interest = 51000.000
```

175 is a disarium number

25 is not a disarium number

Input:

```
num = 175
```

Output:

$$1^1 + 7^2 + 5^3 = 1 + 49 + 125 = 175$$

175 is a disarium number

6. Program to print all Disarium numbers between given range.
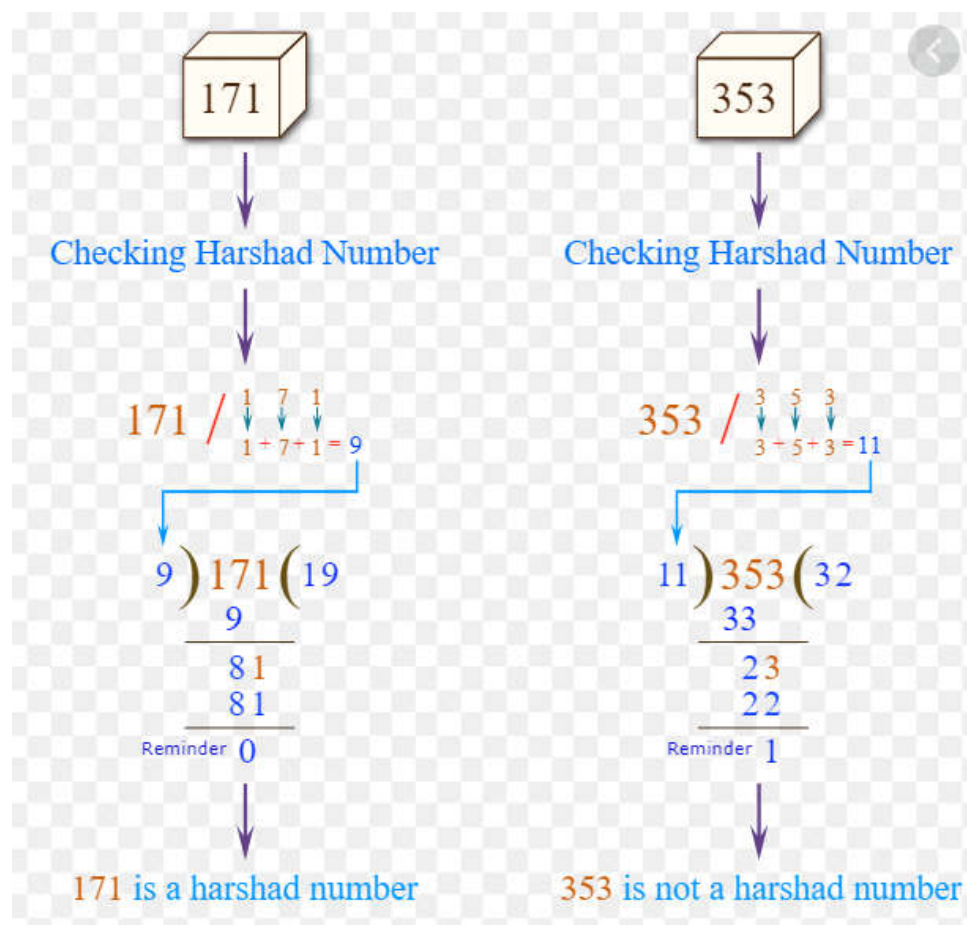
Input:

```
range(1, 101)
```

Output:

```
Disarium numbers between 1 and 100 are: 1 2 3 4 5 6 7 8 9 89
```

7. Program to Check Harshad number.

A number is said to be the Harshad number if it is divisible by the sum of its digit.

A number is said to be pronic number if it is a product of two consecutive numbers.

Example Pronic numbers:

```
6 = 2 x 3
72 = 8 x 9
```

```
5432*
543*1
54*21
5*321
*4321
```

```
1
2 4
3 6 9
4 8 12 16
5 10 15 20 25
6 12 18 24 30 36
7 14 21 28 35 42 49
8 16 24 32 40 48 56 64
9 18 27 36 45 54 63 72 81
10 20 30 40 50 60 70 80 90 100
```