→ Count Digits ←

①
```
while (num > 0)
{
    num = num / 10;      count++;
}
```

② 56473 / 10 × 10 × 10 . . . → log Arbhme ÷

$10^x = 56473$

– Find x in power.

$\{ x = \log_{10}(56473) \}$

int ($\log_{10}(n)$) + 1.

$\log_e$ → Change base of log
→ e is default

To change

$$\left[\log_a b = \frac{\log_c b}{\log_c a}\right]$$

$a \to 10$

$$\left[\log_{10} b = \frac{\log_e b}{\log_e 10}\right]$$

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→ Armstrong Number ←

Ex :- 121

$(1)^3 + (2)^3 + (1)^3$

$1 + 8 + 1$

$121 = 10$ Not armstrong

Ex :- 153

$(1)^3 + (5)^3 + (3)^3$

$1 + 125 + 27$

$153 = 153$ Armstrong Number.

→ Palindrome Number ←

: Reverse of a Number is same as original number

Ex :- 123

Rev -> 321 Not Palindrome.

Ex :- 121

Rev -> 121 Palindrome.

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-> Print all Divisors of Number

Ex -> 26
-> 1, 2, 13, 26

Ex -> 24
1, 2, 3, 4, 6, 8, 12, 24

-> 24

1 x 24	->	6 x 4
2 x 12	->	8 x 3
3 x 8	->	12 x 2
4 x 6	->	24 x 1

$\sqrt{24} = 4.89$

No need to see after 4. -> Stop Point

Ex -> 36 $\sqrt{36} = 6$ Stop Point

1 x 36	->	9 x 4
2 x 18	->	12 x 3
3 x 12	->	18 x 2
4 x 9	->	36 x 1
6 x 6		

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* ÷ Prime Number ÷

Ex → num (x)

- The Divisors will be
  1, x
  Then number is Prime Number.

Ex → 5
1, 5. Prime Number.

Ex → 6
1, 2, 3, 6. Not Prime Number.

→ Check between 2 - Sqrt (num).

* Sieve of Eratosthenes

÷ Sieve Algorithm ÷

- Check prime numbers b/w 1-40.

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∴ LCM and HCF ∴

→ Greatest common Divisors [GCD]

(•) Find greatest common divisor of two numbers "24, 36"

24 → 1 × 2 × 4 × 6 × 8 × [12] × 24
36 → 1 × 2 × 3 × 4 × 6 × 9 × [12] × 18 × 36

24, 36 GCD is 12.

∴ Euclidean GCD ∴

If a > b

gcd (a, b) = gcd (a − b, b)

gcd (24, 36)

gcd (36, 24) → gcd (12, 24)
(a, b)

gcd (24, 12) → gcd (12, 12)

gcd (12, 12) → gcd (0, 12).

(12) and.