

Dulal - 213902116  
of HSWNA

Answer to the question no: 09

Step: 1

$$353 = (101100001)_2$$

$$353 \Rightarrow 256 + 64 + 32 + 1$$

Step: 2

$$\checkmark 3^1 \text{ mod } 391 = 3$$

$$\checkmark 3^2 \text{ mod } 391 = 9$$

$$\checkmark 3^4 \text{ mod } 391 = 81$$

$$\checkmark 3^8 \text{ mod } 391 = 82$$

$$3^{16} \text{ mod } 391 = 245$$

$$\checkmark 3^{32} \text{ mod } 391 = 9$$

$$\checkmark 3^{64} \text{ mod } 391 = 61$$

$$\checkmark 3^{128} \text{ mod } 391 = 62$$

$$\checkmark 3^{256} \text{ mod } 391 = 245$$

Step: 3

$$3 \times 9 \times 81 \times 245 \text{ mod } 391$$

$$= 109 \text{ A2 IV bro.}$$

### Answer to the question no. 103

From which part of India

$$7) - 20$$

$$- 21 \overline{) 10000000} = 520$$

$$\underline{1}$$

$$1 + 50 + 50 + 225 = 325$$

$$n =$$

1 P.S. born

5.9942

### Answer to the question no. 102

To understand whether or not 173 is composite or prime, it is important to find its factors.

factors of: 1, 173

$$P = 1 P.S. born$$

Therefore, we can say that 173 is a prime number since it has only 2 factors

1 P.S. born

$$2 P.S. = 1 P.S. \cdot 1 P.S.$$

Again, we get  $\sqrt{173} = 1 P.S. \cdot 1 P.S.$

We know,  $\sqrt{169} = 1 P.S. \cdot 1 P.S.$

and

$$\sqrt{144} = 1 P.S. \cdot 1 P.S.$$

prime numbers between 2 → 14

$$= (2, 3, 5, 7, 11, 13)$$

Now,

$$\frac{173}{3} = 57.66 \quad | \text{ false}$$

$$\frac{173}{5} = 34.6 \quad | \text{ false}$$

$$\frac{173}{2} = 86.5 \quad | \text{ false}$$

$$\frac{173}{7} = 24.714 \quad | \text{ false}$$

$$\frac{173}{11} = 15.72 \quad | \text{ false}$$

$$\frac{173}{13} = 13.30 \quad | \text{ false.}$$

So, 173 is prime number

Answer to the question no: 01

$$100 / 10$$

It is not true. That means it is false.

because Bigger number (100) can't divide  
smaller positive number (10)

Answer to the question no: 02