

1. TYPES OF NUMBERS^①

Class: VII. FOUNDATION

SOLUTIONS

2025-26

TEACHING TASK

IEE MAINS

01.	0 is not natural number	Ans: C
02.	0	Ans: C
03.	$\frac{3}{4}$	Ans: B
04.	3.5	Ans: C
05.	Factors of 6 = {1, 2, 3, 6} Sum = 1 + 2 + 3 + 6 = 12 = 2 × 6 ∴ Hence, 6 is a perfect number	Ans: A
06.	$30 = 2 \times 3 \times 5$	Ans: A
07.	$\sqrt{2}$	Ans: B
08.	0.75	Ans: C

09.

$$\begin{array}{r} 12 \overline{) 18} (1 \\ \underline{12} \\ 6 \overline{) 12} (2 \\ \underline{12} \\ 0 \end{array}$$

$$H.C.F = 6$$

(2)

Ans: B

10.

$$4 \times 5 = 20$$

Ans: C

JEE ADVANCED LEVEL

01

$$-5, 0, \frac{3}{7}$$

Ans: A, B, D

02

$$0, 2, 6$$

Ans: A, B, D

03

Statement I: Conceptual (True)

Statement II: Conceptual (False)

Ans: C

04.

Statement I: Conceptual (True)

Statement II: Conceptual (False)

Ans: C

05

Assertion: Conceptual (True)

Reason: Conceptual (True)

Ans: A

06

Assertion: Conceptual (True)

Reason: Conceptual (True)

Ans: A



07.	0	Ans: C
08	$\sqrt{2}$	Ans: C
09.	9	Ans: C
10.	6	Ans: A
11.	4	Ans: 4
12.	$5 \times 7 = 35$	Ans: 35

- 13 a) 2 is a Rational and Even (✓)
 b) 24 is a ^{not} perfect number,
 since, factors of 24 = {1, 2, 3, 4, 6, 8, 12, 24}
 $Sum = 1 + 2 + 3 + 4 + 6 + 8 + 12 + 24$
 $= 60 \neq 48$

$$\begin{array}{r} 36 \\ 24 \\ \hline 60 \end{array}$$

- c) $\therefore$ 24 is a rational and Even (✓)
 c) -3 is an Integer and odd (✓)
 d) $\frac{1}{3}$ is a Rational but not Even (✓)
 $\therefore$ Ans: 2, 2, 4, 5

06 0

(5)
Ans: B07 $3i$ where $i = \sqrt{-1}$

Ans: B

$$\begin{array}{r}
 18 \overline{) 24} (1 \\
 \underline{18} \\
 6 \overline{) 18} (3 \\
 \underline{18} \\
 0
 \end{array}$$

HCF = 6

Ans: C

09. 15

Ans: C

$$\begin{array}{r}
 2 \overline{) 60} \\
 2 \overline{) 30} \\
 3 \overline{) 15} \\
 5
 \end{array}$$

$$: 60 = 2 \times 2 \times 3 \times 5$$

Ans: A

JEE MAINS LEVEL

01. -23 is a real, rational, integer Ans: B

$$\begin{array}{r}
 8 \overline{) 8, 24, 48} \\
 3 \overline{) 1, 3, 6} \\
 1, 1, 2
 \end{array}$$

$$\begin{aligned}
 \text{L.C.M} &= 8 \times 3 \times 2 \\
 &= 48
 \end{aligned}$$

Ans: C

$$\begin{array}{r}
 36 \overline{) 108} (3 \\
 \underline{108} \\
 0
 \end{array}$$

H.C.F = 36

Ans: A

4. 7, 11, 13, 17

Ans: B

05 Infinite

Ans: B

06 1, 2, 3, 4, 6, 12

Ans: C

$$\begin{array}{r}
 2 \overline{) 200} \\
 2 \overline{) 100} \\
 2 \overline{) 50} \\
 5 \overline{) 25} \\
 5
 \end{array}$$

$$200 = 2^3 \times 5^2$$

Ans: B

08 0

Ans: B

09 2 and 19

Ans: A

10. 4, 6, 8, 9

Ans: D

ADVANCED LEVEL

01. 4, 6, 15

Ans: A, B, D

02 $\sqrt{2}$, 5, $-\frac{1}{2}$

Ans: A, B, D

03 Statement I: Conceptual (True)Statement II: Conceptual (False)

Ans: C

04. Statement I: Conceptual (True) (7)

Statement II: Conceptual (False) Ans: C

05. Assertion: $\sqrt{49} = 7$, a rational no. (True)

Reason: Conceptual (True) Ans: A

06. Assertion: 2 is even prime number (False)

Reason: Conceptual (True) Ans: D

07. 2

Ans: B

08. 4

Ans: C

09. $3 \times 4 = 12$

Ans: C

10. $\text{HCF}(5, 9) = 1$

Ans: B

11. prime numbers b/w 1 and 20
 $= \{2, 3, 5, 7, 11, 13, 17, 19\}$

total = 8

Ans: 8

12.
$$\begin{array}{r} 36 \overline{) 60} (1 \\ \underline{36} \\ 24 \overline{) 36} (1 \\ \underline{24} \end{array}$$

$$\begin{array}{r} 12 \overline{) 24} (2 \\ \underline{24} \\ 0 \end{array}$$

HCF = 12

Ans: 12

13

a) 7 (q)

b) -5 (p)

c) $0.25 = \frac{1}{4}$ (r)

d) $\sqrt{3}$ (s)

Ans: q, p, r, s

13

a) Conceptual (q)

b) Conceptual (p)

c) Conceptual (r)

d) Conceptual (s)

Ans: q, p, r, s

⇒ THE END ⇐