

# 5. FRACTIONS 2025/26 ①

## Class: VI, MATHEMATICS

### FOUNDATION<sup>+</sup> SOLUTIONS

#### TEACHING TASK

#### JEE MAINS LEVEL

|     |                                                                                                                 |                                                   |
|-----|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| 01. | $\frac{5}{2}$                                                                                                   | Ans: B                                            |
| 02  | Conceptual                                                                                                      | Ans: A                                            |
| 03  | $3\frac{4}{5} \rightarrow 3\frac{4+2}{5} \rightarrow 3\frac{6}{5}$                                              | Ans: A                                            |
| 04  | $4\frac{2}{5} \rightarrow \frac{22}{5}$                                                                         | Ans: A                                            |
| 05  | Conceptual                                                                                                      | Ans: B                                            |
| 06  | $2\frac{4}{5} \rightarrow \frac{14}{5}$                                                                         | Ans: A                                            |
| 07  | $\frac{45+5}{60} = \frac{2}{x} \Rightarrow x = 4$                                                               | Ans: D                                            |
| 08  | option Verification:<br><u>option: B:</u> $\frac{9}{13} = 0.69$ ; $\frac{11}{17} = 0.64$ ; $\frac{5}{8} = 0.62$ | Ans: B                                            |
| 09  | $\frac{24}{168} = \frac{1}{7}$                                                                                  | Ans: B                                            |
| 10  | Watch cartoons $\rightarrow \frac{1}{4}$<br>Do not watch cartoons $\rightarrow \frac{3}{4}$                     | $\therefore \frac{3}{4} \times 48 = 36$<br>Ans: C |

11.

$$\frac{1}{2} \times \frac{4}{4} = \frac{4}{8} \quad (\text{or}) \quad \frac{8}{16} = \frac{1}{2}$$

Ans: B<sup>(2)</sup>

11

$$\frac{8}{16} = \frac{1}{2}$$

Ans: B

12

$$A) \frac{8}{12} = \frac{2}{3}$$

Ans: A

13

$$\frac{2}{3} = 0.66 \text{ (Approx.)}$$

$$\frac{7}{10} = 0.7 \text{ clearly } 0.66 < 0.7 < 1$$

Ans: A

14

Option Verification: D

$$\frac{1}{4} = 0.25; \quad \frac{3}{8} = 0.375; \quad \frac{2}{5} = 0.4$$

Ans: D

## JEE ADVANCED LEVEL

01.

Given  $\frac{a}{b} = \frac{5}{6}$ 

$$A) \frac{10}{12} = \frac{5}{6} \checkmark$$

$$B) \frac{15}{18} = \frac{5}{6} \checkmark$$

$$C) \frac{25}{30} = \frac{5}{6} \checkmark$$

$$D) \frac{20}{24} = \frac{5}{6} \checkmark \text{ Ans: A, B, C, D}$$

02

$$A) \frac{1}{2} = \frac{2}{4}; \quad B) \frac{1}{3} = \frac{3}{9}$$

Ans: A, B

03

Statement I:  $\frac{9}{2}$  is a proper fraction (False)

Statement II: Conceptual (True)

Ans: B

04. Statement I:  ~~$\frac{3}{4} < \frac{2}{4}$~~  (False) (3)

04. Statement I: Conceptual (True)

Statement II: Conceptual (True) Ans. A

05. Assertion: Conceptual (True)

Reason: Conceptual (True) Ans. A

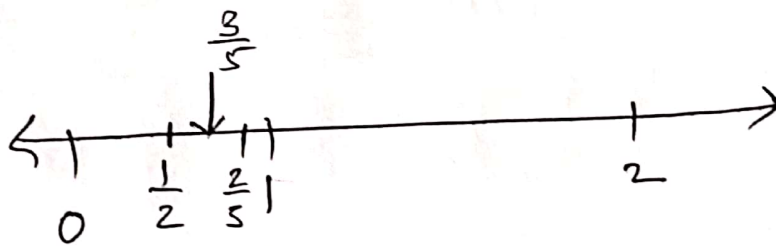
06. Assertion: Conceptual (True)

Reason: Conceptual (True) Ans. A

07. Assertion:  $\frac{24}{7} = \frac{18}{7}$  (True)

Reason: Conceptual (True) Ans. A

08



$$\frac{1}{2} < \frac{3}{5} < \frac{2}{3}$$

Ans. B

[09]  $\frac{3}{5} \rightarrow$  Improper

Ans. A

10  $\frac{7}{8} \times \frac{3}{3} = \frac{21}{24}$  ;  $\frac{1}{3} \times \frac{8}{8} = \frac{8}{24}$

clearly  $\frac{21}{24} < \frac{17}{24} < \frac{8}{24}$

Ans. D

11.  $\frac{p}{q} = \frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$   $\therefore p = 6$

Ans. 6

12

$$\frac{1}{4} = \frac{77}{x} \Rightarrow x = 28$$

Ans: 28 (4)

13

a) Decimal Fractions (x)

b) vulgar Fractions (s) (q)

c) like Fractions (p)

d) unlike Fraction (q) (s)

Ans: x, (s, q), p, (q, s)

14

a) 80p  $\rightarrow$  Rs =  $5 \times 100 = 500$  p.

$$\therefore \frac{80}{500} = \frac{4}{25} (x)$$

b) 8 hours  $\rightarrow$  2 day =  $2 \times 24 = 48$  hours

$$\therefore \frac{8}{48} = \frac{1}{6} (s)$$

c) 450gms  $\rightarrow$  1kg = 1000gms

$$\therefore \frac{450}{1000} = \frac{9}{20} (q)$$

d) 350 ml  $\rightarrow$  1 litre = 1000 ml

$$\therefore \frac{350}{1000} = \frac{7}{200} (p)$$

Ans: x, s, q, p

## LEARNERS TASK (Cuis)

01. Whole part

Ans: A

$$02 \quad \frac{p}{q} = \frac{2}{5} \Rightarrow \frac{3p}{q} = \frac{3 \times 2}{5} = \frac{6}{5}$$

Ans: A

$$03 \quad \frac{21}{8} \times \frac{4}{4} = \frac{84}{32}$$

Ans: C (5)

$$04 \quad \frac{17}{8} \neq \frac{36}{16} \quad \text{also}$$

Ans: D

$$05 \quad \frac{15}{25} = \frac{3}{5}$$

Ans: D

06 Conceptual

Ans: C

$$07 \quad \frac{A}{9} = \frac{a}{18} \Rightarrow a = 8$$

Ans: B

$$08 \quad \frac{10}{3} = 3\frac{1}{3}$$

Ans: A

$$09 \quad 3\frac{2}{5} = \frac{17}{5}$$

Ans: B

$$10 \quad 30 \text{ min} = 30 \times 1 \text{ min} = 30 \times \frac{1}{60} \text{ hr} = \frac{1}{2}$$

Ans: C

$$11 \quad \frac{7}{9} \times \frac{2}{2} = \frac{14}{18}, \frac{14}{18}$$

Ans: A

12 Option verification:

$$c) \frac{1}{4} = 0.25, \frac{3}{5} = 0.6, \frac{5}{6} = 0.8$$

Ans: C

JEE MAINS LEVEL

$$01 \quad 3\frac{2}{7} = \frac{23}{7}$$

$$A) 3\frac{4}{14} = 3\frac{2}{7}$$

Ans: A

02

$$3\frac{4}{5} \rightarrow 3\frac{4+2}{5} \rightarrow 3\frac{6}{5}$$

Ans: A ⑥

03

$$\frac{9}{5} \times \frac{2}{2} = \frac{18}{10}$$

Ans: C

04

$$\frac{7}{3} = 2\frac{1}{3}$$

$$3 \overline{) 7} \begin{array}{l} 2 \\ 6 \\ \hline 1 \end{array}$$

Ans: A

05

$$A) \frac{1}{2} = 0.5 \quad B) \frac{4}{9} = 0.99$$

Ans: A

$$C) \frac{14}{27} = 0.51 \quad D) \frac{2}{3} = 0.6$$

06

$$A) \frac{1}{3} = 0.3 \quad B) \frac{5}{12} = 0.4167$$

Ans: D

$$C) \frac{2}{5} = 0.4 \quad D) \frac{13}{30} = 0.433$$

07

$$\frac{315}{405} = \frac{7}{9}$$

Ans: C

08

$$\frac{7}{13} = 0.53; \quad \frac{2}{3} = 0.67, \quad \frac{4}{11} = 0.36, \quad \frac{5}{9} = 0.56$$

Ascending order  $\rightarrow 0.36, 0.53, 0.56, 0.67$   
 $\frac{4}{11}, \frac{7}{13}, \frac{5}{9}, \frac{2}{3}$

Ans: C

09

$$\frac{1}{3} \neq \frac{7}{20}$$

Ans: D

TEE ADVANCED LEVEL

01

$$\frac{3}{5} = 0.6$$

$$A) \frac{5}{7} = 0.7 \quad B) \frac{2}{3} = 0.66 \quad C) \frac{4}{5} = 0.8 \quad D) \frac{7}{9} = 0.66$$

Ans: A, B, C, D



02  $\frac{2}{5} = \frac{4}{10} = \frac{8}{20}$  Ans: A, B

03 A)  $(\frac{1}{5}, \frac{4}{5})$  c)  $(\frac{1}{6}, \frac{5}{6})$  Ans: A, C

04 Statement I:

$\frac{2}{5} \approx 0.66$   
 mathematically (True/False)  
 Ascending order

$\frac{2}{11}, \frac{2}{9}, \frac{2}{7}, \frac{2}{5}, \frac{2}{3}$

Statement II: Conceptual (True)

Ans: D

05 Statement I:  $\frac{2}{3} = 0.66$   
 $: 0 < 0.66 < 1$  (True)

Statement II: Conceptual (False)

Ans: C

06 Assertion: Conceptual (True)

Reason: Conceptual (True)

Ans: A

07 Assertion: Conceptual (True)

Reason: Conceptual (True)

Ans: A

08  $\frac{24}{36} = \frac{2}{3}$

Ans: A

09 Conceptual

Ans: C

10 Fatima:  $\frac{15}{14}$

Ans: C

11.  $\frac{7}{10}$

Ans: A

12.  $\frac{2^x}{3} = 8^4 \Rightarrow x = 12$

Ans: 12

13.  $\frac{5}{10} = \frac{x-2}{30} \Rightarrow x-2 = 15 \Rightarrow x = 17$

Ans: 17

14 a)  $\frac{36}{48} = \frac{3}{4}$  (Q)

b)  $\frac{27}{45} = \frac{3}{5}$  (P)

c)  $\frac{18}{30} = \frac{6-3}{10 \cdot 5}$  (R, P)

d)  $\frac{8}{32} = \frac{1}{4}$  (S)

Ans: Q, (R, P), (R, P, S)

15 a)  $\frac{7}{4} = 1.75 \therefore 1 < \frac{7}{4} < 2$  (Q)

b)  $\frac{5}{4} = 1.25 \therefore 1 < \frac{5}{4} < 2$  (Q)

c)  $\frac{17}{8} = 2.125 \therefore 2 < \frac{17}{8} < 3$  (R)

d)  $\frac{10}{3} = 3.33 \therefore 3 < \frac{10}{3} < 4$  (S)

Ans: Q, Q, R, S

$\Rightarrow$  THE END  $\Leftarrow$