

8. FUNDAMENTALS OF FRACTIONS

(2025/26)

Class: VI. MATHEMATICS

FOUNDATION: SOLUTIONS

TEACHING TASK

JEE MAINS LEVEL

01. $\frac{3}{4} + \frac{5}{6}$

$$= \frac{9+10}{12} = \frac{19}{12}$$

Ans. B

02. $\frac{a}{b} \times \frac{b}{c} = \frac{3}{5} \times \frac{2}{3} \Rightarrow \frac{a}{c} = \frac{2}{5}$

Ans. C

03. $\frac{2}{5} \times \frac{3}{4} = \frac{3}{10}$

Ans. B

04. $\frac{2x}{3y} = \frac{2}{3} \times \frac{7}{9} = \frac{14}{27}$

Ans. A

05. $\frac{p}{q} \times \frac{q}{r} = \frac{4}{7} \times \frac{3}{5} \Rightarrow \frac{p}{r} = \frac{12}{35}$

Ans. A

06. $\frac{3}{4} \times \frac{3}{2} = \frac{9}{8}$

Ans. A

07. $\frac{45}{60} = \frac{3}{x} \Rightarrow x = 4$

Ans. D

08. Short

08. $\frac{11}{17} = 0.64$; $\frac{9}{13} = 0.69$; $\frac{5}{8} = 0.62$ (2)
 ~~$\frac{11}{17} > \frac{9}{13} > \frac{5}{8}$~~ $\frac{9}{13} > \frac{11}{17} > \frac{5}{8}$ Ans: B

09. $\frac{24}{168} = \frac{1}{7}$ Ans: B

10. No. of students who watch cartoons = $48 \times \frac{1}{4}$
 $= 12$
 Not watch cartoons = $48 - 12 = 36$ Ans: C

11. $\frac{1}{2} \times \frac{8}{8} = \frac{8}{16}$ Ans: B

12. $\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$ Ans: A

13. $\frac{2}{5} \neq \frac{9}{20}$ Ans: C

JEE ADVANCED

01. A) $\frac{2}{4} = \frac{4}{8}$ ✓ B) $\frac{3}{6} = \frac{1}{2} = \frac{6}{12}$ ✓ C) $\frac{5}{10} = \frac{3}{6} = \frac{7}{14}$ ✓

Ans: A, B, C

02. A) $\frac{9}{10} > \frac{7}{8} > \frac{5}{6}$ C) $\frac{11}{12} > \frac{5}{6} > \frac{3}{4}$ D) $\frac{8}{9} > \frac{3}{5} > \frac{1}{2}$

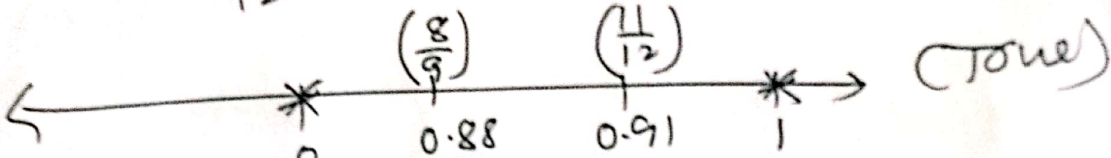
Ans: A, C, D

03. Statement I: $\frac{6}{9} = \frac{2}{3}$ (True)

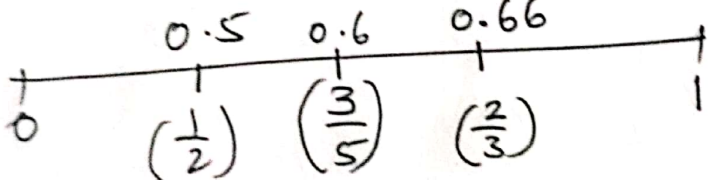
Statement II: Conceptual (True)

Ans: A

04. Statement I: $\frac{1}{3} = 0.33$; $\frac{3}{8} = 0.37$, $\frac{5}{12} = 0.4$ (3)
 Ascending order = $\frac{1}{3}, \frac{3}{8}, \frac{5}{12}$ (True)
 Statement II: Conceptual (false) Ans: C

05. Assertion: $\frac{11}{12} = 0.916$ and $\frac{8}{9} = 0.888$

 Reason: Mathematically (True) Ans: A

06. Assertion: $\frac{4}{5} = 0.8$; $\frac{7}{10} = 0.7$ (True)
 $\frac{4}{5} > \frac{7}{10}$
 Reason: Mathematically (True) Ans: A

07. 
 $\therefore \frac{1}{2} < \frac{3}{5} < \frac{2}{3}$ Ans: B

08. Proper Fraction Ans: B

09. $\frac{2}{5} = 0.4$; $\frac{3}{8} = 0.37$; $\frac{1}{4} = 0.25$
 Larger portion = $\frac{2}{5}$ (Arjun) Ans: A

10. Decimal Conversion Ans: D

11. $\frac{9}{10} > \frac{7}{10} > \frac{6}{10} \rightarrow$ Rank of $\frac{7}{10} = 2$
Ans: 2

12.

$$\frac{12}{4} = 3$$

(4)
Ans: 3

13

$$a) \frac{3}{5} \text{ vs } \frac{9}{7} \Rightarrow 21 \text{ vs } 20 (P)$$

$$b) 50 \text{ vs } 56 (Q)$$

$$c) 24 \text{ vs } 21 (R)$$

$$d) 10 \text{ vs } 9 (S)$$

Ans: P, Q, R, S

14

$$a) \frac{2}{5} < \frac{3}{5} < \frac{4}{5} (P)$$

$$b) \frac{1}{3} = 0.33; \frac{2}{3} = 0.66; \frac{1}{2} = 0.5$$

$$\frac{1}{3} < \frac{1}{2} < \frac{2}{3} (Q)$$

$$c) \frac{4}{10} = \frac{2}{5} = 0.4 \text{ and } \frac{3}{4} = 0.6$$

$$A = B < \frac{3}{4} (R)$$

$$d) \frac{3}{10} = 0.3, \frac{1}{5} = 0.2, \frac{1}{2} = 0.5$$

$$\frac{1}{5} < \frac{3}{10} < \frac{1}{2} (S)$$

Ans: P, Q, R, S

LEARNERS TASK (CUE'S)

01

$$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$

Ans: A

02

$$\frac{3P}{9} = 3 \times \frac{2}{5} = \frac{6}{5}$$

Ans: A

03

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

Ans: C

04.	$\frac{17}{8} \neq \frac{36}{16}$	Ans. D ⁽⁵⁾
05	$\frac{15}{25} = \frac{3}{5}$	Ans. D
06	Does not exists	Ans. C
07	$\frac{4}{9} = \frac{a}{18} \Rightarrow a = 8$	Ans. B
08	$\frac{10}{3} = 3\frac{1}{3}$	Ans. A
09	$3\frac{2}{5} = \frac{17}{5}$	Ans. C
10	$\frac{30}{60} = \frac{1}{2} \text{ min}$	Ans. B

JEE MAINS LEVEL

01	$\frac{1}{2} + \frac{2}{3} = \frac{7}{6}$	Ans. A
02	$\frac{5}{6} - \frac{1}{3} = \frac{5-2}{6} = \frac{3}{6} = \frac{1}{2}$	Ans. A
03	$\frac{a}{b} \times \frac{b}{c} = \frac{3}{4} \times \frac{5}{6} \Rightarrow \frac{a}{c} = \frac{5}{8}$	Ans. A

04.

$$\frac{p}{q} = \frac{2}{3} \Rightarrow \frac{q}{p} = \frac{3}{2}$$

$$\Rightarrow \frac{q}{p} + 1 = \frac{3}{2} + 1$$

$$\Rightarrow \frac{q+p}{p} = \frac{5}{2}$$

Ans: B

05

A) $\frac{1}{2} = 0.5$ B) $\frac{4}{9} = 0.44$ C) $\frac{14}{21} = 0.51$

D) $\frac{2}{3} = 0.6$; Smallest $\frac{4}{9}$

Ans: B

07

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

Ans: C

06

A) $\frac{1}{3} = 0.33$

B) $\frac{5}{12} = 0.41$

C) $\frac{2}{5} = 0.4$

D) $\frac{13}{30} = 0.43$

Ans: D

08

$\frac{7}{13} = 0.53$; $\frac{2}{3} = 0.66$; $\frac{4}{11} = 0.36$; $\frac{5}{9} = 0.55$

$$0.36 < 0.53 < 0.55 < 0.66$$

$$\frac{4}{11} < \frac{7}{13} < \frac{5}{9} < \frac{2}{3}$$

Ans: C

09

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

Ans: D

JEE ADVANCED

01.

A) $\frac{5}{6} = 0.8$

B) $\frac{7}{8} = 0.8$

C) $\frac{3}{4} = 0.75$

D) $\frac{1}{2} = 0.5$

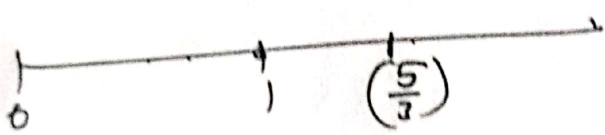
Ans: A, B

02. A) $\frac{5}{6} = 0.8$ B) $\frac{3}{4} = 0.75$ C) $\frac{7}{8} = 0.8$ D) $\frac{2}{3} = 0.6$ (9)
 clearly $\frac{5}{6} > 0.75$, $\frac{7}{8} > 0.75$ Ans: A, C

03. Statement I: Conceptual (True)
 Statement II: Conceptual (False) Ans: C

04. Statement I: $0 < \frac{2}{3} = 0.6 < 1$ (True)
 Statement II: Conceptual (False) Ans: C

05. Assertion: $\frac{24}{36} = \frac{2}{3}$ (True)
 Reason: Conceptual (False) Ans: C

06. Assertion: $\frac{5}{3} = 1.6$ (False)


Reason: Conceptual (False) Ans: B

07. $\frac{24}{36} = \frac{2}{3}$ Ans: A

08. Conceptual Ans: C

09. Improper fraction: $\frac{13}{13}$, $\frac{15}{14}$ (mohan, Fatima)
 Ans: B, C

10. proper fraction: $\frac{7}{10}$,

Ans: A &

11. Improper fractions: $\frac{11}{11}$, $\frac{5}{4}$, $\frac{9}{5}$

Ans: 3

12. $\frac{19}{8} = 2.3$

$\therefore 2 < \frac{19}{8} < 3$

Ans: —

13. a) $\frac{36}{48} = \frac{3}{4}$ (q)

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

c) $\frac{18}{30} = \frac{3}{5}$ (p)

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

Ans: q, r, p, s

14. a) $\frac{7}{4} = 1.7$

b) $\frac{5}{6} = 0.8$

c) $\frac{9}{8} = 1.1$

d) $\frac{4}{5} = 0.8$

$1 < \frac{7}{4} < 2$ (~~q~~ p, r, s)

$0 < \frac{5}{6} < 1$ (q)

$1 < \frac{9}{8} < 2$ (p, r, s)

$0 < \frac{4}{5} < 1$ (q)

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

$\Rightarrow$ THE END $\Leftarrow$