

# INTEGRATED<sup>+</sup> (V<sub>2</sub>) (P)

Class: VI, MATHEMATICS

## 1. FUNDAMENTALS OF FRACTIONS

### TEACHING TASK (JEE MAINS)

01)  $\frac{7}{10}, \frac{9}{10}, \frac{4}{5} \times \frac{2}{2} = \frac{8}{10}$

$\therefore \text{least} = \frac{7}{10}$

Ans: A

02)  $\frac{2}{7} < \frac{3}{7} < \frac{5}{7}$

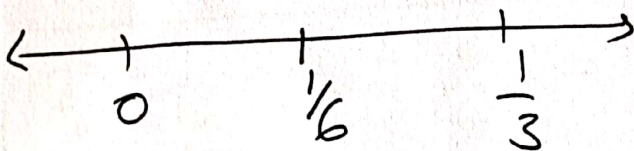
$\therefore \text{middle} = \frac{3}{7}$

Ans: B

03) B)  $\frac{4}{6} = \frac{2}{3}$

Ans: B

04.



Ans: B

05)  $\frac{11}{3} = 3\frac{2}{3}$

$3) \frac{11}{9} \text{ L3}$   
 $\frac{9}{2}$

Ans: D

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

Ans: A

07)  $\frac{45}{60} = \frac{3}{x} \Rightarrow x = 3 \times \frac{60}{45}$

$\Rightarrow x = 4$

Ans: D

08

$$\frac{9}{13} > \frac{18}{17} > \frac{5}{8}$$

Ans: B

09

$$\frac{24}{168} = \frac{1}{7}$$

Ans: B

10

$$\text{Watch Cartoons} = 48 \times \frac{1}{4} = 12$$

$$\therefore \text{Do not watch cartoons} = 48 - 12 = 36 \quad \text{Ans: C}$$

## JEE ADVANCED

11.

$$\frac{3}{4} = 0.750$$

$$\text{A) } \frac{765}{980} = 0.780$$

$$\text{B) } \frac{900}{980} = 0.918$$

$$\text{C) } \frac{825}{1080} = 0.763$$

$$\text{D) } \frac{900}{1200} = 0.75$$

$$\text{clearly } \frac{756}{980}, \frac{900}{980}, \frac{825}{1080} > \frac{3}{4} \quad \text{Ans: A, B, D}$$

12

$$\text{B) } \frac{1}{4} + \frac{3}{4} = \frac{4}{4} = 1$$

$$\text{D) } \frac{7}{8} + \frac{1}{8} = \frac{7+1}{8} = 1$$

Ans: B, D

13

$$\text{A) } \frac{1}{2} = \frac{2}{4} \checkmark$$

$$\text{B) } \frac{1}{3} = \frac{3}{9} \checkmark$$

Ans: A, B

14

$$\text{statement I: } \frac{375}{500} = 0.75, \quad \frac{450}{600} = 0.75$$

$$\frac{525}{700} = 0.75 \quad (\text{False})$$

statement II: Conceptual (True)

Ans: D



15. Statement I: Conceptual (True)

(3)

Statement II: Conceptual (True)

Ans: A

16. Assertion:  $\frac{810}{972} > \frac{648}{972}$  (True)

Reason: Conceptual (True)

Ans: A

17. Assertion: Conceptual (False)

Reason: Conceptual (True)

Ans: D

18.  $\frac{7}{8} = \frac{21}{24}$ ,  $\frac{1}{3} \times \frac{8}{8} = \frac{8}{24}$ .

A)  $\frac{1}{4} \times \frac{6}{6} = \frac{6}{24}$ .

C)  $\frac{11}{12} = \frac{22}{24}$ , B)  $\frac{23}{24}$  D)  $\frac{17}{24}$

clearly  $\frac{6}{24} < \frac{21}{24}$ ,

$$\frac{22}{24} > \frac{21}{24} > \frac{17}{24} > \frac{8}{24} > \frac{6}{24}$$

$$\Rightarrow \frac{11}{12} > \frac{7}{8} > \frac{17}{24} > \frac{1}{3} > \frac{1}{4}$$

Ans: D

19.  $\frac{1}{4} < 1$ ,  $\frac{1}{2} < 1$ ,  $\frac{3}{4} < 1$

Ans: D

20.  $\frac{336}{448} = 0.75$ ,  $\frac{630}{840} = 0.75$

A) Both represent the same point

Ans: A

21.  $\frac{3}{4} = 0.75$

Ans: B <sup>(4)</sup>

22  $\frac{336}{448} = 0.75 = \frac{3}{4}$  Also,  $\frac{630}{840} = 0.75 = \frac{3}{4}$

~~$\therefore \frac{3}{4} + \frac{3}{4} = \frac{6}{4} = \frac{3}{2}$~~  Sum of the Numerators =  $3+3=6$

Ans: B <sup>6</sup>

23  $\frac{11}{4} = \frac{77}{x} \Rightarrow x = 28$

Ans: 28

24 A)  $\frac{420}{840} = 0.5$ ,  $\frac{560}{960} = 0.58$ ,  $\frac{675}{900} = 0.75$

$\therefore$  (P) Ascending order (P)

B)  $\frac{675}{900} = 0.75$ ,  $\frac{560}{960} = 0.58$ ,  $\frac{420}{800} = 0.52$

Descending order (Q)

C)  $\frac{500}{1000} = 0.5$ ,  $\frac{600}{1200} = 0.5$ ,  $\frac{700}{1400} = 0.5$

All nearly equal to 0.5 (R)

D)  $\frac{480}{960} = 0.5$ ,  $\frac{720}{960} = 0.75$ ,  $\frac{960}{960} = 1$

Increasing from 0.5 to 1 (S)

Ans: P, Q, R, S

25 A)  $\frac{80}{500} = \frac{4}{25}$  (R)

B)  $\frac{8}{2 \times 24} = \frac{1}{6}$  (S)

C)  $\frac{450}{1000} = \frac{9}{20}$  (Q)

D)  $\frac{350}{1000} = \frac{7}{20}$  (P)

Ans: R, S, Q, P

# LEARNER'S TASK (CQ'S) (5)

01.	Conceptual	Ans: B
02	$\frac{3}{4}, \frac{5}{6} \rightarrow$ Unlike fractions	Ans: C
03	$\frac{8}{5}$	Ans: C
04	$\frac{1}{4}$	Ans: B
05	8	Ans: C
06	Conceptual	Ans: D
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	1 hour = 60 minutes ∴ 30 minutes = $\frac{1}{2}$ hours	Ans: B

## 1 JEE MAINS LEVEL

01	$\frac{1}{2}$ and $\frac{2}{4}$	Ans: B
02	$\frac{(\frac{1}{3} + \frac{2}{3})}{2} = \frac{1}{2}$	Ans: B
03	$\frac{6}{3} = 2$	Ans: A

$$04. \quad \frac{9}{12} = \frac{3}{4}$$

Ans: C<sup>(6)</sup>

$$05. \quad \frac{3}{8}$$

Ans: C

$$06. \quad \frac{1}{3} = 0.33, \quad \frac{5}{12} = 0.41, \quad \frac{2}{5} = 0.40, \quad \frac{13}{30} = 0.43$$

$$\text{Greatest} = \frac{13}{30}$$

Ans: D

$$07. \quad \frac{315}{405} = \frac{7}{9}$$

Ans: C

$$08. \quad \frac{7}{13} = 0.53, \quad \frac{2}{3} = 0.66, \quad \frac{4}{11} = 0.36, \quad \frac{5}{9} = 0.55$$

Ascending order  $\rightarrow 0.36 < 0.53 < 0.55 < 0.66$

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

Ans: C

$$09. \quad \frac{7}{20} \neq \frac{1}{3}$$

Ans: D

$$10. \quad \frac{2}{5}, \quad \frac{4}{10} = \frac{2}{5}, \quad \frac{6}{15} = \frac{2}{5}, \quad \frac{10}{25} = \frac{2}{5}, \quad \frac{32}{80} = \frac{2}{5}$$

$$\therefore \text{Ans: } \frac{6}{15}$$

Ans: B

### JEE ADVANCED

$$11. \quad \text{A) } \frac{1450}{980} = 1.47, \quad \text{B) } \frac{1250}{625} = 2$$

$$\text{C) } \frac{1820}{910} = 2, \quad \text{D) } \frac{1500}{750} = 2$$

Ans: A



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

Ans: A (7)

13. A)  $\frac{1}{5}, \frac{4}{5}$

C)  $\frac{1}{6}, \frac{5}{6}$  (like fractions)

Ans: A, C

14. Statement I:

Ascending order:  $\frac{2}{11} < \frac{2}{9} < \frac{2}{7} < \frac{2}{5} < \frac{2}{3}$  (False)

Statement II: Conceptual (True)

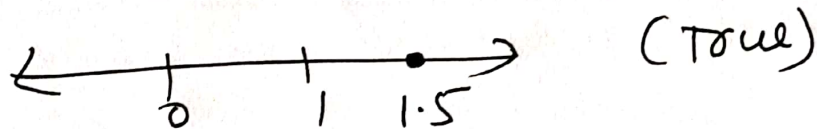
Ans: D

15. Statement I: Conceptual (True)

Statement II: Conceptual (True)

Ans: A

16. Assertion:  $\frac{750}{500} = 1.5$



(True)

Reason: Conceptual (True)

Ans: A

17. Assertion: Conceptual (False)

Reason: Conceptual (True)

Ans: D

18. Rani typed =  $\frac{50}{100} = \frac{1}{2}$  (half book)

meena type =  $\frac{1}{4} \times 100 = 25$  pages

Rani typed more

Ans: A

19. meena typed 25 pages

Ans: B



20  $\frac{630}{945} = 0.66, \frac{540}{720} = 0.75$

$\frac{810}{1080} = 0.75, \frac{864}{960} = 0.90$

Greatest =  $0.90 = \frac{864}{960}$

Ans: D

21.  $\frac{540}{720} = \frac{810}{1080}$

Ans: A

22  $\frac{540}{720} = 0.75, \frac{810}{1080} = 0.75, \frac{864}{960} = 0.90$

$\therefore \frac{3}{4} = 0.75$

clearly  $\frac{864}{960} > \frac{3}{4}$

Ans: I

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

Ans: 17

24 A)  $\frac{24}{78} = \frac{4}{13}$  (q) B)  $\frac{3}{5} \times \frac{4}{4} = \frac{12}{20}$  (r)

C)  $\frac{3}{5} < \frac{8}{5}$  (p) D)  $\frac{5}{3} \times \frac{1}{3} \geq \frac{7}{10}$  (s)

Ans: q, r, p, s

25 A)  $\frac{324}{972} \rightarrow$  Proper fraction (r)

B)  $\frac{864}{432} \rightarrow$  Improper fraction, Equivalent  $\frac{1}{2}$  (r, s)

C)  $\frac{756}{756} = 1$  (whole number, Improper (p, q))

D)  $\frac{512}{1024} = \frac{1}{2}$  (proper,  $\frac{1}{2}$ ) (r, s)

THE END