QUESTIONS

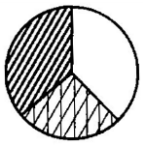
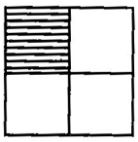
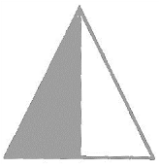
1. $\frac{-3}{2} \div 0 = ?$

(a) $\frac{-3}{8}$ (b) 0 (c) $\frac{-3}{2}$ (d) not define

2. What should be subtracted from 0.1 to get 0.03?

(a) $0,7$ (b) 0.07 (c) 0.007 (d) None of these

3. In which figure does the shaded part represents $1-\frac{1}{3}=?$

(a)  (b)  (c)  (d) 

4. Compare: $15.7-6.4 \bigcirc 3.28+5.91$

(a) $<$ (b) $>$ (c) $=$ (d) None of these

5. $\frac{1}{9}$ of $\frac{1}{6}$ of $\frac{1}{3}$ of $56052 = ?$

(a) 556 (b) 336 (c) 376 (d) 346

6. $\frac{64-0.008}{16+0.8+0.004}=?$

(a) 2 (b) 3.8 (c) 0.6 (d) 4.2

7. Marry has 8 apples. She gives $\frac{1}{4}$ of these to her friend. How many apples does remain with her?

(a) $6-(-4)$ (b) $6-8$ (c) $8-2$ (d) $4-(+2)$

8. What number is equal to

(a) 10.1 (b) 10.01 (c) 1.01 (d) 10.02

9. Divide 0.0211788 by $0.333 = ?$

(a) 0.2 (b) 0.3 (c) 0.4 (d) 0.0636

10. Simplify $\left(5\frac{1}{2}-\frac{1}{3}\right)+\frac{1}{3}\text{ of}\left(5\frac{1}{2}-+2\frac{1}{5}\right)=?$

(a) $1\frac{1}{2}$ (b) $3\frac{3}{4}$ (c) $4\frac{1}{3}$ (d) $3\frac{1}{3}$

11. If the fraction $\frac{x+2}{2}$ and $\frac{y+3}{3}$ are equal then the fraction $\frac{x}{y}$ in simplified form is

(a) $\frac{2}{3}$ (b) $\frac{3}{2}$ (c) $\frac{3}{5}$ (d) None of these

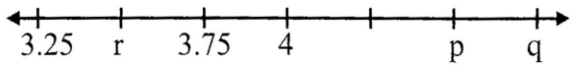
12. If $27.125 = 27 + \frac{A}{10} + \frac{B}{100} + \frac{C}{1000}$ then $\frac{A+B+C}{2} = ?$

(a) 4 (b) 6 (c) 7 (d) 10

13. $\left(1+\frac{1}{2}\right)\left(1+\frac{1}{3}\right)\left(1+\frac{1}{4}\right)\left(1+\frac{1}{5}\right).....\left(1+\frac{1}{n}\right) = ?$

(a) $\frac{2}{n}$ (b) $2n$ (c) $\frac{n+1}{2}$ (d) n

14. The figure below is a number line. Find the value of $(p+q)-r = ?$



(a) 5.75 (b) 6.25 (c) 7.25 (d) 8.45

15. When the mixed fractions are simplified, the value of $1\frac{2}{3} + 2\frac{3}{4} - 3\frac{4}{5}$ is

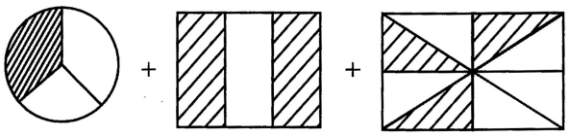
(a) less than $\frac{1}{3}$ (b) greater than $\frac{1}{3}$

(c) equal to $\frac{1}{3}$ (d) None of these

16. A party of 20 people went to a foreign dhaba. They ordered a meal of *Rs.* 36.60 each, but 5 of them had forgotten to bring money. In order to settle the bill, how much more did the other 15 people have to pay?

(a) *Rs.* 36.02 (b) *Rs.* 12.20 (c) *Rs.* 15.20 (d) *Rs.* 15.26

17. What is the sum of the shaded parts if shaded parts expressed in fraction?



(a) $\frac{33}{24}$ (b) $\frac{23}{24}$ (c) $\frac{4}{3}$ (d) $\frac{24}{26}$

18. $\frac{0.9\times0.9\times0.9+0.2\times0.2\times0.2+0.3\times0.3\times0.3-3\times0.9\times0.2\times0.3}{0.9\times0.9+0.2\times0.2+0.3\times0.3-0.9\times0.2-0.2\times0.3-0.3\times0.9} = ?$

(a) 1.4 (b) 0.054 (c) 0.8 (d) 1.0

19. If $2.5+0.5-\left[1.6-\left\{3.2-\left(3.2+2.1\div K\right)\right\}\right] = 0.65$ find K=?

(a) 0.09 (b) 0.7 (c) 7 (d) 2.8

20. $\frac{2}{3-\frac{1}{2-\frac{1}{2+\frac{1}{3+\frac{1}{3}}}}} \times \frac{17}{18} = ?$

(a) 0.4 (b) 0.8 (c) 0.5 (d) 0.6

21. $\dfrac{\left(1-\frac{1}{4}\right)\left(1-\frac{1}{5}\right)\left(1-\frac{1}{6}\right)\left(1+\frac{1}{4}\right)\left(1+\frac{1}{5}\right)\left(1+\frac{1}{6}\right)}{\left(1-\frac{1}{2}\right)\left(1-\frac{1}{3}\right)\left(1-\frac{1}{4}\right)\left(1+\frac{1}{2}\right)\left(1+\frac{1}{3}\right)\left(1+\frac{1}{4}\right)} = ?$

(a) $1\frac{87}{256}$ (b) $1\frac{86}{257}$ (c) $2\frac{86}{4}$ (d) 0

22. The value of $\dfrac{489.1375 \times 0.0483 \times 1.956}{0.0873 \times 92.581 \times 99.749} = ?$

(a) 0.058 (b) 0.06 (c) 0.6 (d) 6

23. Find the value of $\left(\frac{1}{2}+\frac{1}{6}+\frac{1}{12}+\frac{1}{20}+\frac{1}{30}+\frac{1}{42}\ \frac{1}{56}+\frac{1}{72}+\frac{1}{90}+\frac{1}{110}+\frac{1}{132}\right) = ?$

(a) $\frac{12}{11}$ (b) $\frac{11}{12}$ (c) 0 (d) $\frac{13}{12}$

24. If $x = 1+\dfrac{1}{1+\dfrac{1}{1+\dfrac{1}{1+\frac{1}{2}}}}$ then $\left(2x+\frac{7}{4}\right) = ?$

(a) 3 (b) 4 (c) 5 (d) 6

25. $\dfrac{1.7 \times 1.6 \times 0.3 \times 0.3 - 0.51}{1.7 \times 1.7 \times 1.7 + 0.3 \times 0.3 \times 0.3} \times \dfrac{5\ kg\ 600\ gram}{2\ kg\ 800\ gram} = ?$

(a) 2 (b) 1 (c) 2 gram (d) 1 gram

26. $3kg + 2,00,000\ mg - 3020g$ is equal to how many Kilograms?

(a) 0.18 *Kg* (b) 0.17 *Kg* (c) 18 *Kg* (d) 17 *Kg*

27. Shanskar has Rs. 120. He spent $\frac{1}{6}th$ of them to buy chocolates, $\frac{1}{5}th$ of remaining amount is spent on pens $\frac{1}{4}th$ of remaining is spent on books. The amount (in Rs.) left with Shanskar, is

(a) Rs. 46 (b) Rs. 40 (c) Rs. 50 (d) Rs. 60

28. The fraction $\dfrac{2121212121210}{112121212111}$ when reduced to its simplest form is

(a) $\frac{73}{70}$ (b) $\frac{37}{7}$ (c) $\frac{70}{37}$ (d) $\frac{70}{13}$

29. $\left[\left\{1+\dfrac{1}{20+\frac{1}{20}}\right\}\times\left\{1+\dfrac{1}{20+\frac{1}{20}}\right\}-\left\{1-\dfrac{1}{20+\frac{1}{20}}\right\}\times\left\{1-\dfrac{1}{20+\frac{1}{20}}\right\}\right] \div \left[\left\{1+\dfrac{1}{20+\frac{1}{20}}\right\}+\left\{1-\dfrac{1}{20+\frac{1}{20}}\right\}\right]$

(a) $\frac{40}{401}$ (b) $\frac{90}{401}$ (c) $\frac{400}{401}$ (d) $\frac{401}{400}$

30. $\left(\frac{1}{20}+\frac{1}{30}+\frac{1}{42}+\frac{1}{56}+\frac{1}{72}+\frac{1}{90}+\frac{1}{112}+\frac{1}{132}\right)\times 0.2 \times 0.5 \times 0.10 = ?$

(a) $\frac{5}{3000}$ (b) $\frac{6}{1000}$ (c) $\frac{7}{200}$ (d) $\frac{7}{4000}$

ANSWER – KEY				
1. D	**2.** B	**3.** B	**4.** B	**5.** D
6. B	**7.** C	**8.** A	**9.** D	**10.** B
11. A	**12.** A	**13.** C	**14.** A	**15.** B
16. B	**17.** A	**18.** A	**19.** D	**20.** B
21. A	**22.** A	**23.** B	**24.** C	**25.** B
26. A	**27.** D	**28.** C	**29.** A	**30.** A

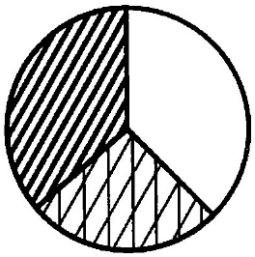
SOLUTIONS

1. $\frac{-3}{2} \div 0 = \text{not defined}$

2. $0.1 - x = 0.03$

$x = 0.1 - 0.03 = 0.07$

3. $1 - \frac{1}{3} = \frac{2}{3}$



4. $15.7 - 6.4(\ ) 3.28 + 5.91$

$\therefore\ 9.3 > 9.19$

5. $\frac{1}{9}\text{ of }\frac{1}{6}\text{ of }\frac{1}{3}\text{ of }56052 = 346$

6. $\frac{64.000 - 0.008}{16 + 0.8 + 0.004} = \frac{63.992}{16.804} = 3.8$

7. $8 \times \frac{1}{4} = 2$

$\therefore$ No. of Apple many have $= 8 - 2 = 6$

8. $\frac{0.2}{0.02} + \frac{0.02}{0.2} = \frac{10}{1} + \frac{0.1}{1} = 10.1$

9. $\frac{0.0211788}{0.333} = \frac{21.1788}{333} = 0.0636$

10. $\left(5\frac{1}{4} - 2\frac{1}{3}\right) + \frac{1}{3}\text{ of }\left(5\frac{1}{2} \div 2\frac{1}{5}\right) = \left(\frac{21}{4} - \frac{7}{3}\right) + \frac{1}{3}\text{ of }\left(\frac{11}{2} \div \frac{11}{5}\right)$

$= \left(\frac{63 - 28}{12}\right) + \frac{1}{3} \times \frac{5}{2}$

$= \frac{35}{12} + \frac{5}{6} = \frac{35 + 10}{12} = \frac{45}{12} = \frac{15}{4} = 3\frac{3}{4}$

11. $13x + 6 - 2y + 6$

$3x = 2y$

$\frac{x}{y} = \frac{2}{3}$

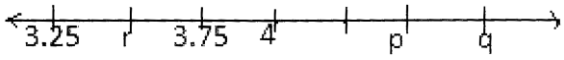
12. $27 + \frac{1}{10} + \frac{2}{100} + \frac{5}{1000} = 27 + \frac{A}{10} + \frac{B}{100} + \frac{C}{1000}$

$\therefore A=1, B=2, C=5$

So, $\quad \dfrac{1+2+5}{2}=\dfrac{8}{2}=4$

13. $\dfrac{3}{2}\times\dfrac{4}{3}\times\dfrac{5}{4}\times\dfrac{6}{5}.....\dfrac{n+1}{n}$

$=\dfrac{n+1}{2}$

14. 

$r=3.5,\ p=4.5,\ q=4.75$

$\therefore (4.5+4.75)-3.5=1+4.75=5.75$

15. $\dfrac{5}{3}+\dfrac{11}{4}-\dfrac{19}{5}$

$=\dfrac{100+165-228}{60}=\dfrac{265-228}{60}$

$\dfrac{37}{60}>\dfrac{1}{3}$

16. Total money $=36.60\times 20=Rs.\ 732.00$

$=\dfrac{Rs.\ 36.60\times 5}{15}=Rs.\ 12.20$

17. $\dfrac{1}{3}+\dfrac{2}{3}+\dfrac{3}{8}$

$=1+\dfrac{3}{8}=\dfrac{11\times 3}{8\times 3}=\dfrac{33}{24}$

18. Let 0.9 be a, 0.2 be b & 0.3 be c

Then $\dfrac{a^3+b^3+c^2+3abc}{a^2+b^2+c^2-ab-ac-bc}$

$\dfrac{(a+b+c)(a^2+b^2+c^2-ab-bc-ac)}{(a^2+b^2+c^2-ab-bc-ac)}$

$a+b+c$

$\therefore a+b+c=0.9+0.2+0.3=1.4$

19. $2.5+0.5-\left[1.6-\left\{3.2-3.2-(2.1+K)\right\}\right]=0.6$

$3-\left[1.6+2.1+K\right]=0.65$

$1.6+2.1+K=2.35$

$2.1\div K=2.35-1.$

$2.1\div K=0.75$

$\dfrac{2.1}{K}=0.75$

$$K = \frac{2.1}{0.75} = \frac{21}{7.5} = 2.8$$

20. $$\frac{2}{3-\frac{1}{2-\frac{1}{2+\frac{3}{10}}}} \times \frac{17}{18}$$

$$= \frac{2}{3-\frac{1}{2-\frac{10}{23}}} \times \frac{17}{18}$$

$$= \frac{2}{3-\frac{23}{36}}$$

$$\frac{2 \times 36}{108-23} = \frac{17}{18}$$

$$= \frac{4}{85} \times 17 = 0.8$$

21. $$\left(\frac{15}{16} \times \frac{24}{25} \times \frac{35}{36}\right) \div \left(\frac{3}{4} \times \frac{9}{8} \times \frac{48}{49}\right)$$

$$= \frac{15}{16} \times \frac{24}{25} \times \frac{35}{36} \times \frac{4}{3} \times \frac{9}{8} \times \frac{49}{48} = 1\frac{87}{256}$$

22. The value of

$$\frac{489.1375 \times 0.0483 \times 1.956}{0.0873 \times 92.581 \times 99.749} = 0.058$$

23. $$\left(\frac{1}{2} + \frac{1}{2} - \frac{1}{3} + \frac{1}{3} - \frac{1}{4} + \frac{1}{4} - \frac{1}{5} ..... + \frac{1}{11} - \frac{1}{12}\right)$$

$$= 1 - \frac{1}{12} = \frac{11}{12}$$

24. $$x = 1 + \frac{1}{1+\frac{1}{1+\frac{2}{3}}}$$

$$= 1 + \frac{1}{1+\frac{3}{5}}$$

$$= 1 + \frac{5}{8}$$

$$\therefore\ x = \frac{13}{8}$$

$$= 2x + \frac{7}{4} = \frac{13}{4} + \frac{7}{4} = \frac{20}{4} = 5$$

25. $\frac{(a^2+b^2-ab)}{(a^2+b^2-ab)(a+b)} \times \frac{5.6\ kg}{2.8\ kg}$

$= \frac{1}{2} \times 2 = 1$

26. $3kg + \frac{200000}{1000000} kg - 3.02kg$

$= 3kg + 0.2kg - 3.02kg$

$= 3.2kg - 3.02kg$

$= 0.18kg$

27. $\frac{1}{6} \times 120 = 20$

$\text{Remaining } = 120 - 20 = 100$

$\frac{1}{5} \times 20 = 20, \text{Remaining } = 100 - 20 = Rs.\ 80$

$\frac{1}{4} \times 80 = 20, \text{Remaining } = 80 - 20 = Rs.\ 60$

28. $\frac{2121212121210}{11212121211} = \frac{70}{37}$

29. $\frac{a^2-b^2}{a+b} = a - b = \left[1 + \frac{20}{401}\right] - \left[1 - \frac{20}{401}\right] = \frac{40}{401}$

30. $\left(\frac{1}{4} - \frac{1}{5} + \frac{1}{5} - \frac{1}{6} + \frac{1}{6} - \frac{1}{7} \ldots\ldots + \frac{1}{11} - \frac{1}{12}\right) \times \frac{2}{10} + \frac{5}{10} \times \frac{1}{10} = \left(\frac{1}{4} - \frac{1}{12}\right) \times \frac{2}{10} \times \frac{5}{10} \times \frac{1}{10}$

$= \frac{2}{12} \times \frac{1}{100} = \frac{1}{600} \times \frac{5}{5} = \frac{5}{3000}$