KEY POINTS –

- Proper fraction – Numerator < Denominator

- Improper fraction – Numerator > Denominator

- Improper to mixed – $Q\dfrac{R}{D}$, Q - Quotient , R - remainder , D - denominator

- Mixed to improper – $Q\dfrac{R}{D} = \dfrac{Q \times D + R}{D}$

- Like fraction have same denominator

- Equivalent fraction has same value

- Simplest and lower form – when numerator and denominator have no common factor

- To compare, addition and subtraction convert all fraction into equivalent like fraction.

- Two numbers are called reciprocal if their product gives 1.

- Like decimals having the same number of decimal places.

- In addition, and subtraction of decimals first convert the numbers into like decimals.

- Multiplication of decimal by 10, 100, 1000 etc. shift decimal point right by 1, 2, 3 places according to the number of zeros.

- In division by 10, 10, 1000 etc. decimal point shift towards left side.

SINGLE OPTION CORRECT

1. The reciprocal of a proper fraction is

   (A) 1   (B) an improper fraction

   (C) also a proper fraction   (D) a unit fraction

2. To multiply a decimal number by 100, shift the decimal point to the

   (A) Right by one place   (B) right by 2 places   (C) left by 2 places   (D) remain same

3. When the product of two fractions is unity, each is called the:

   (A) denominator of the other   (B) numerator of the other

   (C) additive inverse of the other   (D) Reciprocal of the other

4. Simplified the product $\left(2 - \dfrac{1}{3}\right)\left(2 - \dfrac{3}{5}\right)\left(2 - \dfrac{5}{7}\right)\left(2 - \dfrac{17}{19}\right)$

   (A) 21/9   (B) 23/3   (C) 19/17   (D) None

5. Which fraction is not equal to other three

(A) 2/5   (B) 26/65   (C) 14/35   (D) 34/68

6. How many more squares must be shaded so that the given figure has $\frac{2}{5}$ as unshaded fraction.

(A) 8   (B) 6

(C) 5   (D) 7
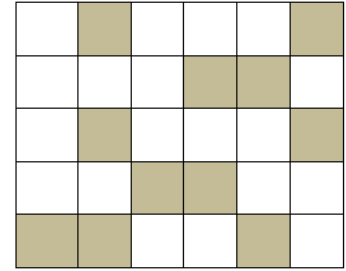
7. The length of rectangular sheet of paper is 3/5 cm and the breadth is 2/5 cm. Find the perimeter.

(A) 1 cm   (B) 2 cm   (C) 3 cm   (D) 4 cm

8. The value of $\left(0.2 + \frac{1}{5} \right) \times \frac{2}{7} =$

(A) 2/35   (B) 3/35   (C) 5/35   (D) 4/35

9. Find the value of $4\frac{4}{5} + 3\frac{5}{6} + 2\frac{8}{10}$

(A) 450/50   (B) 343/30   (C) 339/15   (D) 280/30

10. To multiply a decimal number by 100, shift the decimal point to the

(A) Right by 2 place   (B) left by 2 places   (C) right by 3 places   (D) left by 1 places

11. How much less is 10 km than 30.6 km?

(A) 10.6 km   (B) 20.6 km   (C) 30.6 km   (D) 10km

12. 7 paisa is equal to

(A) ₹ 0.7   (B) ₹ 0.07   (C) ₹ 7.00   (D) ₹ 70

13. Fraction having denominator as 10, 100, 1000, etc., are known as _____ fractions,

(A) Unlike fraction   (B) like fraction   (C) decimal fraction   (D) unit fraction

14. The value of 18.35 ÷ 1.835 is

(A) 1   (B) 10   (C) .01   (D) 0.1

15. The value of $[2\frac{4}{8} - 3\frac{4}{8}] + [2\frac{4}{8} - 3\frac{4}{8}] +$ .... up to 20 times is ___

(A) 2   (B) - 2   (C) 20   (D) - 20

16. Ascending order of $\frac{12}{11}, \frac{11}{12}, \frac{5}{6}, \frac{6}{5}$ is

(A) $\frac{5}{6} < \frac{6}{5} < \frac{11}{12} < \frac{12}{11}$ (B) $\frac{6}{5} < \frac{5}{6} < \frac{12}{11} < \frac{11}{12}$ (C) $\frac{5}{6} < \frac{11}{12} < \frac{12}{11} < \frac{6}{5}$ (D) $\frac{11}{12} < \frac{5}{6} < \frac{6}{5} < \frac{12}{11}$

17. Suman studies for $7\dfrac{1}{3}$ hours daily. She devotes $3\dfrac{4}{5}$ hours of her time for Science and Mathematics. How much time does she devote for other subjects?

(A) $2\dfrac{13}{15}$ h

(B) $11\dfrac{2}{15}$ h

(C) $4\dfrac{7}{15}$ h

(D) $3\dfrac{8}{15}$ h

18. the place value of 2 in 25.67 is

(A) 1

(B) 2

(C) 20

(D) 0.2

19. 1.44 ÷ 1.2 is equal to

(A) 1.2

(B) 12

(C) 0.12

(D) 120

20. Simplify: 3 ¼ + ½ ÷ ¾ - ½ × 3 ½

(A) $2\dfrac{1}{6}$

(B) $3\dfrac{1}{6}$

(C) $2\dfrac{1}{5}$

(D) $3\dfrac{1}{5}$

21. $(2 – 1 ÷ 3) × (2 – 3 ÷ 5) × (2 – 5 ÷ 7) × (2 – 17 ÷ 19)$

(A) $\dfrac{21}{9}$

(B) $\dfrac{23}{3}$

(C) $\dfrac{19}{17}$

(D) None of these

22. 2.2 × 0.2 × 0.001 is equal to

(A) 0.00044

(B) 4.4

(C) 4.04

(D) None of these

23. Which one is correct?

(A) 0.658 < 0.732 < 0.514 < 0.813

(B) 0·514 < 0·658 < 0. 732 < 0.813

(C) 0.813 < 0.732 < 0.658 < 0.514

(D) 0·514 < 0·732 < 0. 658 < 0.813

24. The expression $\dfrac{1}{15} ÷ \left(\dfrac{4}{15} + \dfrac{1}{3} \right)$ is equivalent to

(A) $\dfrac{1}{9}$

(B) 9

(C) $\dfrac{1}{5}$

(D) 5

25. By what number should $1\dfrac{1}{2}$ be divided to get $\dfrac{2}{3}$?

(A) $2\dfrac{2}{3}$

(B) $1\dfrac{2}{3}$

(C) $\dfrac{4}{9}$

(D) $2\dfrac{1}{4}$

MULTIPLE OPTIONS CORRECT

1. Madhavi eats one full bar of chocolate. Then she divides another one into 5 equal parts and eats 3 of them. What is the total number of chocolates that she has eaten?

   (A) $1\frac{3}{5}$ 　　　　　 (B) $1\frac{5}{3}$ 　　　　　 (C) 8/5 　　　　　 (D) 8/3

2. The value of $\left(1-\frac{1}{2}\right)\left(1-\frac{1}{3}\right)\left(1-\frac{1}{4}\right)\cdots\left(1-\frac{1}{10}\right)=$

   (A) 11/10 　　　　　 (B) 0.01 　　　　　 (C) 1/10 　　　　　 (D) 0.1

3. Which of the following have multiple inverse

   (A) -2 　　　　　 (B) 1/x 　　　　　 (C) ∞ 　　　　　 (D) 0

4. The set that is closed in subtraction

   (A) Fraction 　　　　　 (B) Integer 　　　　　 (C) Negative integer 　　　　　 (D) Rational number

5. The fraction $\frac{11}{7}$ lies between

   (A) 0 and 1 　　　　　 (B) 1 and 2 　　　　　 (C) 0 and 2 　　　　　 (D) -1 and 2

6. Which statements is not true.

   (A) 1 ÷ 20 can be written as 0.05 　　　　　 (B) 0.30 is less than 0.3000

   (C) Value of a number increase when decimal moves from right to left 　　　　　 (D) all of these

7. False statements are

   (A) the reciprocal of a proper fraction is proper fraction 　　　　　 (B) the reciprocal of 1 is 0

   (C) the reciprocal of a proper fraction is improper fraction 　　　　　 (D) Reciprocal of 0 is 0

8. Choose the following statements whose results are same

   (A) 0.0275 × 17 　　　　　 (B) 0.275 × 1.7 　　　　　 (C) 0.275 (1 + 0.7) 　　　　　 (D) 27.5 × 1.7

9. $20 + \frac{4}{100}$ Written as

   (A) $20\frac{4}{100}$ 　　　　　 (B) 20 .04 　　　　　 (C) 2 +0.04 　　　　　 (D) $2\frac{4}{100}$

10. Choose the correct statement for shaded part

    (A) $1\frac{5}{4}$ 　　　　　 (B) 9/4

    (C) $\frac{3}{4} + 1 + \frac{2}{4}$ 　　　　　 (D) 4/5
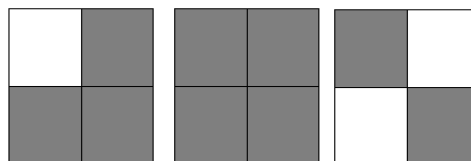
11. Select the correct value(s) of $\dfrac{1}{4\frac{2}{7}} + \dfrac{1}{3\frac{11}{13}} + \dfrac{1}{\left(\frac{5}{9}\right)}$

(A) $\dfrac{172}{75}$ (B) $\dfrac{344}{150}$ (C) $2\dfrac{12}{75}$ (D) $2\dfrac{22}{75}$

12. Select the correct option(s)

(A) $-\dfrac{1}{3} < -\dfrac{3}{4} < 0 < \dfrac{7}{12}$

(B) $\{49 \div (-7) - (-15)\} + 4 \times (-7 + 3)$ equals – 8

(C) $\dfrac{2}{3}$ of $\left(\dfrac{1}{4} + \dfrac{\overline{1}}{2}\dfrac{3}{8}\right) \div 1\dfrac{1}{2}$ equals $\dfrac{1}{6}$

(D) $(-2) \times (3) \times (-1) \times (-2)$ equals – 12

13. Select the correct statement about fractions. (n, m are Integers, m ≠ 0)

(A) $\dfrac{43}{8} = 5\dfrac{3}{8}$

(B) $5\dfrac{2}{3} - 7\dfrac{1}{3} + 4\dfrac{2}{3} = 3$

(C) $\dfrac{2 \div 3}{5 \div 4} = \dfrac{2 \times 4}{3 \times 5} = \dfrac{8}{15}$

(D) $\dfrac{n}{m}$ is a proper fraction if n > m

14. Consider the Division as shown in the figure

(A) A = 5, B = 6, C = 8.

(B) A = 7, B = 6, C = 8.

(C) A×B – C = 22

(D) A×(C - B) = 14

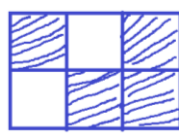15. Consider the Figure as shown and the shading representing fractions A, B, C & D respectively.
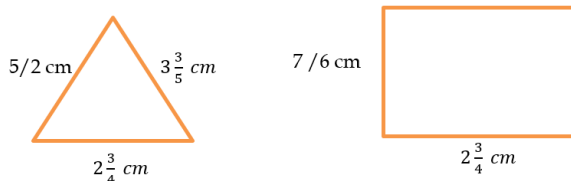

(A) A = 1/4 (B) B = 1/4 (C) C = 2/3 (D) 2D < B + C

SUBJECTIVE PROBLEMS

1. If $47.2506 = 4A + \frac{7}{B} + 2C + \frac{5}{D} + 6E$, then the value of $5A + 3B + 6C + D + 3E$ is _____

   (Where A, B, C, D & E are Natural Numbers)

2. Calculate the value of $\frac{2}{5} + 2\frac{4}{9} \div \left[\left(7\frac{5}{12} - 5\frac{3}{4}\right) \div 22\frac{1}{2} + 10 \times \frac{5}{18}\right] - \frac{4}{5}$.

3. Find the value of

   (a) $\frac{0.34 - 0.034}{0.0034 \div 34}$

   (b) $2.3 - [1.89 - \{3.6 - (2.7 - 0.8 - 0.03)\}]$

   (c) $\frac{5 - \left[\frac{3}{4} + \left\{2\frac{1}{2} - \left(\frac{1}{2} + \frac{1}{6} - \frac{1}{7}\right)\right\}\right]}{2}$

4. If $\frac{37}{13} = 2 + \cfrac{1}{a + \cfrac{1}{b + \frac{1}{c}}}$ where a, b, c are natural numbers, find the value of a, b, c.

5. A bought $45\frac{1}{4}$ meters of fabric. She used $29\frac{1}{4}$ meters to make 12 curtains. Remaining is used to make four cushion cover. Find out how much fabric used to make one cushion cover.

6. A group of 20 people went to restaurant. 9 of them ordered a meal of ₹42.20 each and 7 of them ordered a meal of ₹47.60 each and rest ordered a meal of ₹50 each. Then find out how much more money they would spend if all ordered meal of ₹47.60.

7. Ravish reads (1/3) part of a book in 1 hour. How much part of the book will he read in $2\frac{1}{5}$ hours?

8. Each side of regular polygon is 2.5 cm in length. The perimeter of the polygon is 12.5 cm. Find the number of sides of the polygon.

9. A man gave 1/3 of his money to his son, 1/5 to his money to his daughter and remaining to his wife. If his wife gets ₹350000, what is the total amount?

10. If cost of register is ₹$7\frac{3}{4}$, find the number of registers that can be purchased for ₹$69\frac{3}{4}$.

11. A rectangular sheet of paper is $12\frac{1}{2}$ cm long and $10\frac{2}{3}$ cm wide. Find its perimeter.

12. By selling oranges at the rate of ₹ $5\frac{1}{4}$ per orange, a fruit seller gets ₹ 630. How many dozens of oranges does he sell?

13. How many buckets of equal capacity can be filled from 586.5 litres of water, if each bucket has capacity of 8.5 litres?

14. Find the perimeter of triangle and rectangle, also find whose perimeter is greater?

    5/2 cm $3\frac{3}{5}$ cm   7 /6 cm

    $2\frac{3}{4}$ cm $2\frac{3}{4}$ cm

15. Rahul walks 2/5 km from his home and reach at a point A then he walks straight about 450 meters and stop there. His friend walking towards Rahul and covered 850 m. Distance between their homes is 2km then find distance between Rahul and his friend.

THANKS!

☺

Keep smiling!

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ANSWER KEY & SOLUTION

SINGLE OPTION CORRECT

1. B	2. B	3. D	4. D
5. C	6. D	7. B	8. D
9. B	10. A	11. B	12. B
13. C	14. B	15. D	16. C
17. D	18. C	19. A	20. A
21. D	22. A	23. B	24. A
25. D			

MULTI OPTIONS CORRECT

1. A, C	2. C, D	3. A, B	4. B, D
5. B, C, D	6. B, C	7. A, B, D	8. A, B, C
9. A, B	10. A, B, C	11. A, B, D	12. B, C, D
13. A, B, C	14. B, D	15. A, C, D	

SUBJECTIVE

1. 153.6003	2. 16/35	3 (a) 16/35, (b) 2.08, (c) $1\frac{23}{168}$	
4. a = 1, b = 5, c = 2	5. 4 m	6. ₹ 39	7. 11/15
8. 5	9. ₹75,000	10. 9	11. $46\frac{1}{3}$ cm
12. 10 dozens	13. 69	14. $8\frac{17}{20}\ cm, 7\frac{5}{6}cm$, Triangle	
15. 300 m			