



## MATHS

### BOOKS - PEARSON IIT JEE FOUNDATION

### EQUATIONS AND THEIR APPLICATIONS

#### Example

1. If  $3x + 20 = 65$ , then find the value of  $x$



Watch Video Solution

2. If  $5x - 8 = 3x + 22$ , then find the value of  $x$



Watch Video Solution

3. Solve for  $m$ :  $\frac{m - 3}{2} + \frac{m - 2}{3} = -13$



[Watch Video Solution](#)

4. The sum of the digits of a two-digit number is 9. If 27 is subtracted from the number, then the digits interchange their places. Find the number



[Watch Video Solution](#)

5. Ram and Rahim have Rs 60,000 together. If Ram has Rs 8000 more than Rahim, then find how much money Ram has



[Watch Video Solution](#)

6. Sixteen years hence, a man's age will be 9 times his age 16 years ago. Find his age 5 years hence



[Watch Video Solution](#)

7. In a bag, there are 50 paise coins, Rs 1 coins, and Rs 2 coins. The total value of these coins is Rs 30. The number of Rs 2 coins is half the number of Rs 1 coins, which is half the number of 50 paise coins. Find the number of Rs 1 coins.

A. 20

B. 16

C. 15

D. 10

**Answer: D**



[Watch Video Solution](#)

 Watch Video Solution

8. The cost of three chairs and four tables is Rs 28,00. If the cost of each chair is Rs 600, then find the cost of each table (in Rs)

 Watch Video Solution

9. Solve the following inequations:

(a)  $x + 5 < 7, x \in R$

(b)  $4x - 3 \geq 17, x \in Z$

(c)  $3x - 2 < 1, x \in N$

 Watch Video Solution

10. Solve:  $\frac{18 - 2m}{5} + \frac{4m + 3}{7} \geq \frac{m}{5} + \frac{8}{7}$

 Watch Video Solution

11. Represent the following inequations on number line

(a)  $x \leq 3$

(b)  $y \geq -1$

(c)  $z < -4$

 [Watch Video Solution](#)

12. If  $3x + 20 = 65$ , then find the value of  $x$

 [Watch Video Solution](#)

13. If  $5x - 8 = 3x + 22$ , then find the value of  $x$

 [Watch Video Solution](#)

14. Solve for  $m$ :  $\frac{m - 3}{2} + \frac{m - 2}{3} = -13$

 [Watch Video Solution](#)

15. The sum of the digits of a two-digit number is 9. If 27 is subtracted from the number, then the digits interchange their places. Find the number

 [Watch Video Solution](#)

16. Ram and Rahim have Rs 60,000 together. If Ram has Rs 8000 more than Rahim, then find how much money Ram has

 [Watch Video Solution](#)

17. Sixteen years hence, a man's age will be 9 times his age 16 years ago. Find his age 5 years hence



[Watch Video Solution](#)

18. In a bag, there are 50 paise coins, Rs 1 coins, and Rs 2 coins. The total value of these coins is Rs 30. The number of Rs 2 coins is half the number of Rs 1 coins, which is half the number of 50 paise coins. Find the number of Rs 1 coins



[Watch Video Solution](#)

19. The cost of three chairs and four tables is Rs 28,00. If the cost of each chair is Rs 600, then find the cost of each table (in Rs)



[Watch Video Solution](#)

**20.** Solve the following inequations:

(a)  $x + 5 < 7, x \in R$

(b)  $4x - 3 \geq 17, x \in Z$

(c)  $3x - 2 < 1, x \in N$



**Watch Video Solution**

**21.** Solve the following inequations:

(a)  $x + 5 < 7, x \in R$

(b)  $4x - 3 \geq 17, x \in Z$

(c)  $3x - 2 < 1, x \in N$



**Watch Video Solution**



22. Solve the inequation:

$$3x - 22 < 2, x \in N$$



Watch Video Solution

23. Solve:  $\frac{18 - 2m}{5} + \frac{4m + 3}{7} \geq \frac{m}{5} + \frac{8}{7}$



Watch Video Solution

24. Represent the following inequations on number line

(a)  $x \leq 3$

(b)  $y \geq -1$

(c)  $z < -4$



Watch Video Solution

25. Represent the following inequations on number line

(a)  $x \leq 3$

(b)  $y \geq -1$

(c)  $z < -4$



Watch Video Solution

26. Represent the following inequations on number line

(a)  $x \leq 3$

(b)  $y \geq -1$

(c)  $z < -4$



Watch Video Solution

Very Short Answer Type Question

1. An open sentence containing the sign is equal to is called an equation

 [Watch Video Solution](#)

2. The root of the equation  $\frac{2x + 3}{4} = x + 8$  is 7

 [Watch Video Solution](#)

3. For the inequation  $\frac{4}{3}x - 2 < 0$ ,  $x = 2$  is a solution.

 [Watch Video Solution](#)

4.  $3p - 15 > p + 25$ ,  $p = 20$  is a solution of the given inequation



[Watch Video Solution](#)

5. If 68 is divided into two parts such that one part is one-third of the other, then the smallest part is 17.



[Watch Video Solution](#)

6. If the number of variables present in the equation is \_\_\_\_, then it is called a simple equation



[Watch Video Solution](#)

7. If  $5m + 18 = 8$ , then  $m = \underline{\hspace{2cm}}$



[Watch Video Solution](#)

8. If  $x = 5$ , then  $\frac{x}{2} + \frac{1}{2} = \text{-----}$

 [Watch Video Solution](#)

9. The root of the equation  $0.8x + 9 = 17$  is \_\_\_\_\_

 [Watch Video Solution](#)

10. In a two-digit number if,  $p$  is the ten's digit and  $q$  is the units digit, then the two-digit number is \_\_\_\_\_

 [Watch Video Solution](#)

11. If one-third of a number  $x$  is subtracted from two-third of the number  $x$ , then the result is 6. Then  $x = \text{-----}$

 [Watch Video Solution](#)

Watch Video Solution

12. If  $0.2y + 10.2 > 11$ , then  $y > \underline{\hspace{2cm}}$

 Watch Video Solution

13. If  $\frac{x}{2} - 3 = 6$ , then  $x = \underline{\hspace{2cm}}$

 Watch Video Solution

14. The solution of  $\frac{3x}{4} + \frac{x}{4} \leq 4$  is  $\underline{\hspace{2cm}}$

 Watch Video Solution

15. If  $\frac{x}{5} \geq 25$ , then  $x = \underline{\hspace{2cm}}$

 Watch Video Solution

Watch Video Solution

16. If  $2x - 3 = 13$ , then  $x =$  \_\_\_\_\_



Watch Video Solution

17. If  $x + 3\frac{1}{2} = 5$ , then  $x =$  \_\_\_\_\_



Watch Video Solution

18. If  $\frac{x}{5} - 9 = 1$ , then  $x =$  \_\_\_\_\_



Watch Video Solution

19. If  $\frac{x}{2} + 1 = 3$ , then  $x =$  \_\_\_\_\_



Watch Video Solution

20. Solve for  $z$ :  $\frac{2z}{5} + 6 = z - 3$

A. 12

B. 15

C. 11

D. 10

**Answer: B**



**Watch Video Solution**

21. Solve for  $m$ :  $3(4m + 5) - 4(3 - 2m) = 13$

A.  $1/2$

B. 2



C.  $1/4$

D. 1

**Answer: A**



**Watch Video Solution**

**22. Solve for  $x$ :  $3x + 5 > 7$**

A.  $x > 3/2$

B.  $x > 2/3$

C.  $x < 3/2$

D.  $x < 2/3$

**Answer: B**



**Watch Video Solution**

23. Solve for  $y$ :  $\frac{4y}{3} - 5 < 10$

A.  $y < 27/24$

B.  $t < 33/4$

C.  $y < 45/4$

D.  $y < 59/4$

**Answer: C**



**Watch Video Solution**

24. Solve for  $z$ :  $\frac{z}{3} - 7 \geq z - 19$

A.  $z \leq 12$

B.  $z \leq 15$

C.  $z \leq 18$

D.  $z \leq 21$

**Answer: C**



**Watch Video Solution**

25. Solve for  $x$ :  $2x + 3 = 9$

A. 4

B. 3

C. 2

D. 1

**Answer: B**



**Watch Video Solution**

26. Solve for  $y$ :  $\frac{y}{3} - 7 = -4$

A. 15

B. 12

C. 6

D. 9

**Answer: D**



**Watch Video Solution**

27. Solve for  $x$ :  $12x - 7 = 7x - 13$

A.  $-1.2$

B.  $-1.6$

C.  $-1.8$

D.  $-1.4$

**Answer: A**



**Watch Video Solution**

**28.** Solve for  $m$ :  $1.2m + 2.6 = 5$

A. 4

B. 3

C. 2

D. 1

**Answer: C**



**Watch Video Solution**

## Short Answer Type Questions

1. Divide Rs 98 into two such that one part of 6 times to the other part



Watch Video Solution

2. One-third of a number is equal to 24, then find the value of  $1\frac{1}{2}$  times of the number



Watch Video Solution

3. The sum of three consecutive integers is 24. Find the smallest number



Watch Video Solution

 Watch Video Solution

4. Solve,  $\frac{x}{3} + \frac{x}{6} + \frac{x}{9} = 11$

 Watch Video Solution

5. Solve :  $0.5y + 0.75y = 125$

 Watch Video Solution

6. Solve :  $2.5t + 7.3t = 21.6 - t$

 Watch Video Solution

7. Equal parts of a flag pole are painted with saffron, white, and green colours. If one-third of the portion painted green is 2 m

long, then find the length of the pole



[Watch Video Solution](#)

8. A person covered  $\frac{5}{8}$  of his journey and he has to walk 240 m more to complete his journey. Find the total distance of the journey



[Watch Video Solution](#)

9. A boy has given  $\frac{7}{12}$  of his marbles to his friend and is left with only 20 marbles. Find how many marbles he had with him initially



[Watch Video Solution](#)



10. A number is multiplied by 5 and 25 is subtracted from the product. The result is equal to four times the number itself. Find the number

 [Watch Video Solution](#)

11. One-fourth of a certain number exceeds its one-seventh by 3. find the number

 [Watch Video Solution](#)

12. Solve :  $\frac{5x - 2}{3} + \frac{4x + 3}{2} = \frac{3x + 19}{2}$

 [Watch Video Solution](#)

13. Solve :  $0.3(3y - 4.5) + 2.9(5.5 - 5y) = 1$

 [Watch Video Solution](#)

14. Solve :  $\frac{9m + 4}{5} - \frac{27m + 1}{8} - \frac{1}{2} = 0$

 [Watch Video Solution](#)

15. Solve :  $2m + 5 > 9 - 4m, m \in Q$

 [Watch Video Solution](#)

16. Solve :  $\frac{z}{2} - \frac{z}{3} - \frac{z}{4} = -1$

 [Watch Video Solution](#)

17. Solve :  $\frac{y + 2}{3} + \frac{y + 3}{2} = y + 1$

 [Watch Video Solution](#)

18. Solve :  $\frac{2n + 3}{6n - 5} = 1$

 [Watch Video Solution](#)

19. Solve :  $2(k + 3) + 3(k - 4) = 24$

 [Watch Video Solution](#)

20. One-fifth of a number is 5 more than one-tenth of the number. Find the number

 [Watch Video Solution](#)

21. Twice a number is added to half the number, and result is 250.

Find one-tenth of the number



[Watch Video Solution](#)

22. Solve for  $x$ ,  $8x + 4 \leq 20$  in the set of natural numbers



[Watch Video Solution](#)

## Essay Type Question

1. Five years ago, the age of a person was half of his present age.

How old is he now ?



[Watch Video Solution](#)

2. The present age of A is twice that of B. The sum of their present ages is 33 years. Find the present age of A (in years)



[Watch Video Solution](#)

3. In a two-digit number, the units digit is twice the ten's digit and the difference between the number and the number formed by reversing the digits is 18. Find the original number



[Watch Video Solution](#)

4. Thirty years ago, the age of a man was three-fifth of his present age. Find the present age (in years)



[Watch Video Solution](#)

5. The present age of Shobha is equal to one-fifth of her mother Sudha's age. Twenty -five years later, the age of Shobha will be 4 years less than half the age of her mother Sudha. Find their present ages.



[Watch Video Solution](#)

6. In a two-digit number, the ten digit is one more than twice the units digit. The sum of the digits is 36 less than the number formed by reversing the digits. Find the product of the digits



[Watch Video Solution](#)

7. A man's age 15 years hence would be two times his age six years ago. Find his present age



[Watch Video Solution](#)

 Watch Video Solution

8. In a two-digit number, the sum of the digit is 5 more than the units digit. The difference between the original number and the sum of digits is 10 more than the number formed by reversing the digits. Then find the difference between the digits.



Watch Video Solution

9. Solve :  $\frac{4t}{5} - \frac{5}{3} < \frac{t}{4} + \frac{3}{2}, t \in Q$



Watch Video Solution

10. Solve :  $8a - 7 < \frac{6a}{5} + 27, a \in Q$



Watch Video Solution

11. Solve :  $\frac{14y}{3} + \frac{3}{2} \leq \frac{20y}{3} - \frac{83}{4}$ , where  $y \in Z$

 [Watch Video Solution](#)

12. Solve :  $2x - 5 > 4x - 3$

 [Watch Video Solution](#)

13. In a two-digit number, the sum of the digits is 9. If 9 is subtracted from the number, then the digits get reversed. Find the product of the digits

 [Watch Video Solution](#)



14. A purse contains a certain number of coins of denominations Rs 1 and 25 paise. The total value of the coins (in Rs) is 6 less than the total number of coins. Find the number of 25 paise coins



[Watch Video Solution](#)

15. Rs  $x$  is divided among Mr Bilhari, Mr Narahari, and Mr Murahari. The share of Bilhari is one-fourth of the total money, the share of Murahari is one-third of the remaining money and the share of Narahari is Rs 1200. Find  $x$



[Watch Video Solution](#)

Level 1

1. The root of the equation  $\frac{3}{4}x + 5 = 8$  is \_\_\_\_

A. 5

B. 4

C. 2

D. 1

**Answer: B**



[Watch Video Solution](#)

2. Which of the following is the solution of the equation

$$5p - 10 = 5?$$

A.  $p = 5$

B.  $p = 4$

C.  $p = 2$

D.  $p = 3$

**Answer: D**



**Watch Video Solution**

3. If  $\frac{x}{2} + \frac{x}{3} = 5$ , then  $x = \underline{\hspace{2cm}}$

A. 2

B. 3

C. 4

D. 6

**Answer: D**



**Watch Video Solution**

4. If  $x = 10$ , then  $0.2x + 0.2 =$  \_\_\_\_\_

A. 12.2

B. 10.2

C. 2.2

D. 22

**Answer: C**



[Watch Video Solution](#)

5. If  $\frac{0.2}{x} + 0.1 \geq 2.1$ , then  $x \leq$  \_\_\_\_\_

A. 1

B. 0.1

C. 2

D. 0.2

**Answer: B**



[Watch Video Solution](#)

6. If  $\frac{x}{12} + \frac{1}{2} = x - 5$ , then  $x =$  \_\_\_\_\_

A. 2

B. 4

C. 8

D. 6

**Answer: D**



[Watch Video Solution](#)

7. If  $1.7y + 2.3y = 2$ , then  $y =$  \_\_\_\_\_

A.  $1/4$

B.  $1/2$

C. 8

D. 6

**Answer: B**



[Watch Video Solution](#)

8. If  $5\left(\frac{x}{6} + \frac{1}{2}\right) = 5x - 10$ , then  $x =$  \_\_\_\_

A. 3

B.  $1/3$

C. 6

D.  $1/6$

**Answer: A**



[Watch Video Solution](#)

9. If  $\frac{1}{x} + \frac{3}{x} = \frac{11}{3}$ , then  $x =$  \_\_\_\_\_

A.  $11/3$

B.  $2/3$

C.  $12/11$

D.  $3/11$

**Answer: C**



[Watch Video Solution](#)

10. If  $9.1x + 3x + 1.9x \leq 42$ , the  $x \leq$  \_\_\_\_\_

A. 1

B. 3

C. 5

D. 4

**Answer: B**



[Watch Video Solution](#)

11. If  $5z + 1.5(0.5z + 10) \geq 590$ , then  $z \geq$

A. 15

B. 100



C. 150

D. 200

**Answer: B**



[Watch Video Solution](#)

12. If  $8.3x - 9.8 = x + 26.7$ , then  $x =$  \_\_\_\_\_

A. 2

B. 3

C. 4

D. 5

**Answer: D**



[Watch Video Solution](#)

13. If  $3(a - 2) - 2(a + 9) = 1$ , then  $a =$  \_\_\_\_\_

A. 20

B. 22

C. 25

D. 27

**Answer: C**



[Watch Video Solution](#)

14. If  $2(p - 5) = \frac{p}{2} + 5$ , then  $p =$  \_\_\_\_\_

A. 8

B. 9

C. 10

D. 11

**Answer: C**



**Watch Video Solution**

**15.** Solve for  $a$ :  $3a - 4 = -16$

A.  $-3$

B.  $-4$

C.  $-5$

D. 4

**Answer: B**



**Watch Video Solution**

16. Solve for  $b$ :  $\frac{b}{5} - 5 = 7$

A. 30

B. 60

C. 90

D. 120

**Answer: B**



[Watch Video Solution](#)

17. Solve for  $x$ :  $5x - 6 = 8x - 4$

A.  $-1/3$

B.  $-2/3$

C.  $1/3$

D.  $2/3$

**Answer: B**



**Watch Video Solution**

**18.** Solve for  $k$ :  $1.5k - 3.7 = 0.8$

A. 7

B. 6

C. 5

D. 3

**Answer: D**



**Watch Video Solution**

19. Solve:  $\frac{3x + 4}{7} - \frac{x + 5}{14} = \frac{x}{28} + \frac{x + 1}{14}$

The following steps are involved in solving the above problem.

Arrange them in sequential order

(A)  $5x + 3 = \frac{3x + 2}{2} \Rightarrow 10x + 6 = 3x + 2$

(B)  $\Rightarrow 7x = -4$

(C) Given  $\frac{3x + 4}{7} - \frac{x + 5}{14} = \frac{x}{28} + \frac{x + 1}{14}$

$\Rightarrow \frac{6x + 8 - x - 5}{14} = \frac{x + 2x + 2}{28}$

(D)  $\Rightarrow x = -\frac{4}{7}$

A. ABCD

B. CADB

C. CABD

D. BCAD

**Answer: C**

20. Two-third of a certain number exceeds one-third of the number by 10. Find the number. The following steps are involved in solving the above problem. Arrange them in sequential order

(A)  $\frac{2x}{3} - \frac{x}{3} = 10$  (given)

(B)  $\frac{2x - x}{3} = 10 \Rightarrow \frac{x}{3} = 10$

(C)  $\Rightarrow x = 30$

(D) Let the number be  $x$

A. DACB

B. BDAC

C. ADBC

D. DABC

**Answer: D**



21. Solve:  $\frac{7x + 3}{4} + \frac{9x - 5}{8} = \frac{16x - 3}{16}$

The following steps are involved in solving the above problem.

Arrange them in sequential order

(A)  $x = \frac{-5}{30} = \frac{-1}{6}$

(B)

$$\frac{7x + 3}{4} + \frac{9x - 5}{8} = \frac{16x - 3}{16} \Rightarrow \frac{14x + 6 + 9x - 5}{8} = \frac{16x - 3}{16}$$

(C)  $\frac{23x + 1}{8} = \frac{16x - 3}{16} \Rightarrow 23x + 1 = \frac{16x - 3}{2}$

(D)  $46x + 2 = 16x - 3 \Rightarrow 30x = -5$

A. BCDA

B. CBDA

C. BCAD

D. BDCA

**Answer: A**





22. One-third of a certain number exceeds  $\frac{1}{9}$ th of the number by 20. Find the number.

The following steps are involved in solving the above problem.

Arrange them in sequential order

(A) Let the number  $x$

(B)  $\frac{2x}{9} = 20 \Rightarrow \frac{x}{9} = 10 \Rightarrow x = 90$

(C) Given  $\frac{x}{3} - \frac{x}{9} = 20$

(D)  $\frac{3x - x}{9} = 20$

A. ADCB

B. ACDB

C. DACB

D. CADB

Answer: B



Watch Video Solution

23. Match the following Column A to Column B

**Column A**

If  $\frac{17}{3}x + 20 = 71$ , then  $x =$

The root of the equation  
 $\frac{4}{5}x + 9 = 2x - 3$  is \_\_\_\_.

The solution set of  $\frac{y}{6} + \frac{4}{5} <$   
2 is

If 69 is divided into two  
parts such that one part is  
twice the other, then the  
greater part is \_

**Column B**

(a)  $y < \frac{36}{5}$

(b) 9

(c)  $y > \frac{36}{5}$

(d) 10

(e) 46

(f) 23



Watch Video Solution

## 24. Match the following Column A to Column B

### Column A

If  $\frac{15}{2}y + 10 = -5$ , then  $y =$  \_\_\_\_.

The root of the equation  $\frac{7}{2}x + 2 = 14 + 3x$  is \_\_\_\_.

The solution set  $\frac{x}{5} + 4 > 5$  of is \_\_\_\_.

If 96 is divided into two parts such that one part is twice the other, then the greater part is \_\_\_\_.

### Column B

(a)  $x > 5$

(b) 64

(c) -2

(d) 2

(e) 24

(f)  $x < 5$



Watch Video Solution

## Level 2

1. If  $\frac{9x - 5}{7} + \frac{6 - 3x}{2} = 2$ , then  $x =$  \_\_\_\_\_

A.  $\frac{2}{3}$

B.  $\frac{3}{4}$

C.  $\frac{5}{4}$

D.  $\frac{4}{3}$

**Answer: D**



**Watch Video Solution**

2. If  $3y + 1\frac{1}{2} + 6(4 - 5y) = 12$ , then  $y =$  \_\_\_\_\_

A.  $\frac{1}{6}$

B. 11

C.  $\frac{1}{2}$

D. 7

**Answer: C**



**Watch Video Solution**

3. If  $\frac{z + 5}{7} + \frac{4(z - 11)}{9} + 3 = 0$ , then  $z =$  \_\_\_\_\_

A. 1

B. 2

C. -4

D. 5

**Answer: B**



**Watch Video Solution**

4. If  $\frac{0.3(3x - 4)}{5} + \frac{0.4x + 3.6}{2} = 3.5x$  then  $x =$  \_\_\_\_\_

A. 0.1

B. 0.3

C. 0.5

D. 0.2

**Answer: C**



[Watch Video Solution](#)

5. If  $\frac{7t + 13}{15} + 7\left(\frac{2t - 1}{5}\right) = 6$ , then the value of t is \_\_\_\_\_

A. 2

B. 3

C. 1

D. -2

**Answer: a**



[Watch Video Solution](#)

6. Two-third of a number exceeds one-third of the number by 10.

Find the number

A. 10

B. 20

C. 30

D. 40

**Answer: c**



[Watch Video Solution](#)

7. A number is doubled and half of the number is added to it. If 10 is subtracted from the result, then we get a number which is one less than the original number. Find the original number

A. 5

B. 6

C. 7

D. 8

**Answer: b**



**Watch Video Solution**

**8.** If a number is multiplied by 5 and 5 is added to it, then the result is equal to 50. Find the number

A. 9

B. 8

C. 7

D. 6



**Answer: a**



**Watch Video Solution**

9. If seven times a number is added to one-fifth of itself, then five-sixth of the sum is equal to 30. Find the number

A. 5

B. 6

C. 15

D. 10

**Answer: a**



**Watch Video Solution**

10. If one-fourth, half, and one-third of a number are added to the number itself, then the result is equal to 25. Find the number

A. 10

B. 11

C. 12

D. 14

**Answer: c**



[Watch Video Solution](#)

11. Solve for  $x$ :  $\frac{x}{5} + \frac{x}{7} = 12$

A. 70

B. 140

C. 35

D. 105

**Answer: c**



**Watch Video Solution**

12. Solve for  $x$ :  $\frac{3x - 2}{5x + 7} = \frac{1}{12}$

A.  $-4$

B. 3

C. 1

D.  $-2$

**Answer: c**



**Watch Video Solution**

13. Solve for  $y$ :  $3(y - 4) - 5(y + 5) = -21$

A.  $-4$

B.  $-7$

C.  $-3$

D.  $-8$

Answer: d



Watch Video Solution

14. Two-third of a number is 32 less than three-fifth of the number. Find the number

A. 360

B.  $-480$

C.  $-360$

D.  $480$

**Answer: b**



**Watch Video Solution**

**15.** If one third of a number is subtracted from three times the number, then the result is 800, find the number.

A. 300

B. 400

C. 200

D. 600

**Answer: a**



**Watch Video Solution**

**16.** Solve for  $t$ ,  $3t - 8 \leq -t$  in the set of whole numbers

A. 0, 1, 2

B. 1, 2, 3

C. 0, 1, 2, 3

D. 1, 2, 3, 4

**Answer: a**



**Watch Video Solution**

17. In a two-digit number, the tens digit is twice the units digit. If the sum of its digits is 9. Find the number

A. 63

B. 82

C. 72

D. 36

**Answer: a**



[Watch Video Solution](#)

**Level 3**

1. The present age of a man is seven times the present age of his son. Two years ago, the age of the man was eleven times the

age of the son. Find the present age of the man (in years)

A. 35

B. 26

C. 47

D. 45

**Answer: a**



[Watch Video Solution](#)

2. The present age of A is thrice that of B. Five years from now, A's age will be 8 years more than twice B's age. Find the present age of B (in years)

A. 10

B. 13



C. 12

D. 15

**Answer: b**



**Watch Video Solution**

**3.** The sum of the present ages of Ram and Shyam is 75 years. Ten years ago, Ram's age was 4 times the age of Shyam. Find the difference between their present ages (in years)

A. 22

B. 23

C. 33

D. 30

**Answer: c**



**Watch Video Solution**

4. A road divider of certain length is painted one-sixth yellow, three-fifth black, and the remaining 28m is painted white. Find the length of the divider

A. 100 m

B. 120 m

C. 150 m

D. 92 m

**Answer: b**



**Watch Video Solution**

5. Mr Sumanth spends two-fifth of his salary on house rent and one-fourth on food. After spending Rs 2000 on miscellaneous, if he could save an amount of Rs 5000, then find his monthly income (in Rs)

A. 20000

B. 25000

C. 15000

D. 16000

**Answer: a**



**Watch Video Solution**

6. In a two-digit number, the units digit is 3 more than the ten's digit. The sum of the digits is 18 less than the original number.

Find the product of the digits

A. 54

B. 40

C. 10

D. 28

**Answer: c**



**Watch Video Solution**

7. A number is added to two-third of itself, 1 is subtracted from the sum and the result is divided by 12. If the final result is 12, then find the numbers.

A. 20

B. 87

C. 84

D. 74

**Answer: b**



**Watch Video Solution**

**8.** The present age of A is 4 years less than twice the present age of B. B's present age is 6 years more than twice his age 15 years ago. Find the difference of their ages

A. 30 years

B. 32 years

C. 20 years

D. 22 years

**Answer: c**



**Watch Video Solution**

**9.** A mother said that, her age is one year less than thrice her daughter's age. The daughter is 9 years less than the difference between their present ages. Find the sum of their ages (in years)

A. 45

B. 47

C. 39

D. 35

**Answer: c**



**Watch Video Solution**

10. There are two numbers, the difference between them is equal to twice the smaller number. The sum of the two number is 68.

Find the product of the two numbers

A. 868

B. 965

C. 814

D. 986

**Answer: a**



[Watch Video Solution](#)

11. A student painted a circular region of certain area such that  $\frac{4}{7}$ th of the area was pink,  $\frac{1}{10}$ th area was green, and  $\frac{2}{7}$ th

was yellow. The remaining area of  $6m^2$  was white. Find the area of the region which is painted pink (in sq. units)

- A. 95
- B. 140
- C. 240
- D. 80

**Answer: d**



[Watch Video Solution](#)

**12.** In a two-digit number, tens digit is a multiple of the units digit. The sum of the number and the number formed by reversing the digits is 132. Which of the following can be the product of the two digits ?



A. 16

B. 27

C. 35

D. 18

**Answer: b**



**Watch Video Solution**

**13.** There are three house-hold articles. The cost of the first article is two-fifth the cost of the third article and the cost of the third article is twice the cost of second article. If the total cost of the three articles is Rs 228, then find the cost of the first article (in Rs)

A. 40

B. 48

C. 50

D. 54

**Answer: b**



**Watch Video Solution**

**14.** In an isosceles triangle, the difference between one of the equal sides and the unequal side (longest of the three) is  $\frac{3}{10}$  of the sum of the equal sides. If the perimeter of the triangle is 90 cm, then find the length of unequal side in centimetres

A. 40

B. 80

C. 25

D. 50

**Answer: a**



[Watch Video Solution](#)

15. Mr Anthony travelled  $\frac{4}{9}$  of a certain distance by bus,  $\frac{1}{3}$  by car, and the remaining 6 km by scooter.

Find the distance by bus (in Km)

A. 12

B. 18

C. 9

D. 27

**Answer: a**



[Watch Video Solution](#)

16. Which of the following is a solution of  $\frac{2x - 5}{3} > \frac{3x + 3}{4}$  ?

A.  $x = -5$

B.  $x = -2$

C.  $x = -29$

D.  $x = -30$

Answer: d



Watch Video Solution

17. The unit digit of a two-digit number is 6. If 9 is added to the number, then the number obtained is  $\frac{5}{4}$ th of the number itself. Find the sum of the digits

A. 7

B. 8

C. 9

D. 10

**Answer: c**



**Watch Video Solution**

**18.** A purse contains a certain number of coins of denominations Re. 1 and 50 paise. The total value of the coins (in Rs) is 14 less than the total number of coins. Find the number of 50 paise coins

A. 12

B. 18

C. 22

D. 28

**Answer: d**



**Watch Video Solution**

**19.** Rs  $x$  is divided among A, B and C. The share of A is two-fifth of the total money, the share of B is two-third of the remaining money, and the share of C is Rs 600. Find the value of  $x$

A. 3000

B. 4000

C. 5000

D. 6000

**Answer: a**



**Watch Video Solution**

**20.** Ten years ago, Mohan's age was 35 years less than twice his present age. Find Mohan's present age (in years)

A. 15

B. 20

C. 25

D. 10

**Answer: c**



**Watch Video Solution**

21. Ram, Shyam, and Tarun have a total of Rs 600 with them. The amount with Ram is equal to half of the total amount with the others. Find the amount with Ram (in Rs)

A. 150

B. 300

C. 120

D. 200

**Answer: d**



**Watch Video Solution**

22. The difference of the digits of a two-digit number is 8. The sum of its digits can be \_\_\_\_



A. 8

B. 10

C. Either (a) or (b)

D. Neither (a) or (b)

**Answer: c**



**Watch Video Solution**

**23.** Ramesh and Suresh have a total of Rs 200. If Ramesh gives Rs 40 to Suresh, then the amounts with both would get interchanged. Find the amount with Suresh (in Rs)

A. 70

B. 60

C. 50

Answer: d

 [Watch Video Solution](#)

## Test Your Concepts Very Shory Answer Ype Questions

1. An open sentence containing the sign is equal to is called an equation

 [Watch Video Solution](#)

2. The root of the equation  $\frac{3x + 10}{5} = x + 4$  is \_\_\_

 [Watch Video Solution](#)

3. For the equation  $\frac{4}{3}x - 2 < 0$ ,  $x = 2$  is a solution.



[Watch Video Solution](#)

4.  $3p - 15 > p + 25$ ,  $p = 20$  is a solution of the given inequation



[Watch Video Solution](#)

5. If 68 is divided into two parts such that one part is one-third of the other, then the smallest part is 17.



[Watch Video Solution](#)

6. If the number of variables present in the equation is \_\_\_\_, then it is called a simple equation

 [Watch Video Solution](#)

7. If  $5m + 18 = 8$ , then  $m = \underline{\quad}$

 [Watch Video Solution](#)

8. If  $x = 50$ , then  $\frac{x}{9} + \frac{4}{9} = \underline{\quad}$ .

 [Watch Video Solution](#)

9. The root of the equation  $0.8x + 9 = 17$  is \_\_\_\_\_

 [Watch Video Solution](#)

10. In a two-digit number if,  $p$  is the ten's digit and  $q$  is the units digit, then the two-digit number is \_\_\_\_\_



Watch Video Solution

11. If one-third of a number  $x$  is subtracted from two-third of the number  $x$ , then the result is 6. Then  $x =$  \_\_\_\_\_



Watch Video Solution

12. If  $0.2y + 10.2 > 11$ , then  $y >$  \_\_\_\_\_



Watch Video Solution

13. If  $\frac{x}{2} - 2 = 6$ , then  $x =$  \_\_\_\_\_.



Watch Video Solution

14. The solution of  $\frac{3x}{4} + \frac{x}{4} \leq 4$  is \_\_\_\_



Watch Video Solution

15. If  $\frac{x}{5} \geq 25$ , then  $x = 125$  is a \_\_\_\_ of  $\frac{x}{5} \geq 25$



Watch Video Solution

16. If  $2x - 3 = 5x - 27$ , then  $x =$  \_\_\_\_\_.



Watch Video Solution

17. If  $x + 3 \cdot \frac{1}{2} = 5$ , then  $x =$  \_\_\_\_\_.

 [Watch Video Solution](#)

18. If  $\frac{x}{5} - 9 = 1$ , then  $x =$  \_\_\_\_\_.

 [Watch Video Solution](#)

19. If  $\frac{x}{2} + 1 = 3$ , then  $x =$  \_\_\_\_\_.

 [Watch Video Solution](#)

20. Solve for  $z$ :  $\frac{2z}{5} + 6 = z - 3$

A. 12

B. 15

C. 11

D. 10

**Answer: A**



**Watch Video Solution**

**21. Solve for  $m$ :  $3(4m + 5) - 4(3 - 2m) = 13$**

A.  $1/2$

B. 2

C.  $1/4$

D. 1

**Answer: A**





Watch Video Solution

22. Solve for  $x$ :  $3x + 5 > 7$

A.  $x > 3/2$

B.  $x > 2/3$

C.  $x < 3/2$

D.  $x < 2/3$

Answer: B



Watch Video Solution

23. Solve for  $y$ :  $\frac{4y}{3} - 5 < 10$

A.  $\gamma < 27/4$

B.  $\gamma < 33/4$

C.  $\gamma < 45/4$

D.  $\gamma < 59/4$

**Answer: C**



**Watch Video Solution**

24. Solve for  $z$ :  $\frac{z}{3} - 7 \geq z - 19$

A.  $z \leq 12$

B.  $z \leq 15$

C.  $z \leq 18$

D.  $z \leq 21$

**Answer: C**



Watch Video Solution

25. Solve for  $x$ :  $2x + 3 = 9$

A. 4

B. 3

C. 2

D. 1

Answer: B



Watch Video Solution

26. Solve for  $\gamma$ :  $\gamma \frac{\gamma}{3} - 7 = -4$

A. 15

B. 12

C. 6

D. 9

**Answer: D**



**Watch Video Solution**

**27. Solve for  $x$ :  $12x - 7 = 7x - 13$**

A.  $-1.2$

B.  $-1.6$

C.  $-1.8$

D.  $-1.4$

**Answer: A**



[Watch Video Solution](#)

28. Solve for  $m$ :  $1.2m + 2.6 = 5$

A. 4

B. 3

C. 2

D. 1

**Answer: C**



[Watch Video Solution](#)

29. Divide Rs 98 into two parts such that one part is 6



[Watch Video Solution](#)

**30.** One-third of a number is equal to 24, then find the value of  $1\frac{1}{2}$  times of the number

 [Watch Video Solution](#)

**31.** The sum of three consecutive integers is 24. Find the smallest number

 [Watch Video Solution](#)

**32.** Solve,  $\frac{x}{3} + \frac{x}{6} + \frac{x}{9} = 11$

 [Watch Video Solution](#)

**33.** Solve  $0.5x + 0.75y = 125$



[Watch Video Solution](#)

**34.** Solve :  $2.5t + 7.3t = 21.6 - t$



[Watch Video Solution](#)

**35.** Equal parts of a flag pole are painted with saffron, white, and green colours. If one-third of the portion painted green is 2 m long, then find the length of the pole



[Watch Video Solution](#)

**36.** A person covered  $\frac{5}{8}$  of his journey and he has to walk 240 m more to complete his journey. Find the total distance of the journey



[Watch Video Solution](#)

 [Watch Video Solution](#)

**37.** A boy has given  $\frac{7}{12}$  of his marbles to his friend and is left with only 20 marbles. Find how many marbles he had with him initially



[Watch Video Solution](#)

**38.** A number is multiplied by 5 and 25 is subtracted from the product. The result is equal to four times the number itself. Find the number



[Watch Video Solution](#)

**39.** One-fourth of a certain number exceeds its one-seventh by 3.  
find the number



 [Watch Video Solution](#)

40. Solve :  $\frac{5x - 2}{3} + \frac{4x + 3}{2} = \frac{3x + 19}{2}$

 [Watch Video Solution](#)

41. Solve :  $0.3(3y - 4.5) + 2.9(5.5 - 5y) = 1$

 [Watch Video Solution](#)

42. Solve :  $\frac{9m + 4}{5} - \frac{27m + 1}{8} - \frac{1}{2} = 0$

 [Watch Video Solution](#)

43. Solve :  $2m + 5 > 9 - 4m, m \in \mathbb{Q}$

 [Watch Video Solution](#)

44. Solve:  $\frac{z}{2} - \frac{z}{3} - \frac{z}{4} = -1$

 [Watch Video Solution](#)

45. Solve  $\frac{\gamma + 2}{3} + \frac{\gamma + 3}{2} = \gamma + 1$

 [Watch Video Solution](#)

46. Solve:  $\frac{3n + 8}{7n - 4} = 1$

 [Watch Video Solution](#)

47. Solve:  $2(3k + 7) + 3(2k - 5) = 23$



[Watch Video Solution](#)

48. One-fifth of a number is 5 more than one-tenth of the number. Find the number



[Watch Video Solution](#)

49. If twice a number is added to half the number, then the result is 250. Find one-tenth of the number.



[Watch Video Solution](#)

50. Solve for  $x$ ,  $8x + 4 \leq 20$  in the set of natural numbers



[Watch Video Solution](#)

**51.** Five years ago, the age of a person was half of his present age. How old is he now ?

 [Watch Video Solution](#)

**52.** The present age of A is twice that of B. The sum of their present ages is 33 years. Find the present age of A (in years)

 [Watch Video Solution](#)

**53.** In a two-digit number, the units digit is twice the ten's digit and the difference between the number and the number formed by reversing the digits is 18. Find the original number

 [Watch Video Solution](#)

**54.** Thirty years ago, the age of a man was three-fifth of his present age. Find the present age (in years)



[Watch Video Solution](#)

**55.** The present age of Shobha is equal to one-fifth of her mother Sudha's age. Twenty -five years later, the age of Shobha will be 4 years less than half the age of her mother Sudha. Find their present ages.



[Watch Video Solution](#)

**56.** In a two-digit number, the ten digit is one more than twice the units digit. The sum of the digits is 36 less than the number formed by reversing the digits. Find the product of the digits



[Watch Video Solution](#)

 Watch Video Solution

57. A man's age 15 years hence would be two times his age six years ago. Find his present age

 Watch Video Solution

58. In a two-digit number, the sum of the digit is 5 more than the units digit. The difference between the original number and the sum of digits is 10 more than the number formed by reversing the digits. Then find the difference between the digits.

 Watch Video Solution

59. Solve:  $\frac{4t}{5} - \frac{5}{3} < \frac{t}{4} + \frac{3}{2}, t \in Q$

 Watch Video Solution

60. Solve  $4b - 3 < \frac{b}{2} + 7$



Watch Video Solution

61. Solve :  $\frac{14y}{3} + \frac{3}{2} \leq \frac{20y}{3} - \frac{83}{4}$ , where  $y \in \mathbb{Z}$



Watch Video Solution

62. Solve  $6x - 7 > 5x - 6$



Watch Video Solution

63. In a two-digit number, the sum of the digits is 9. If 9 is subtracted from the number, then the digits get reversed. Find

the product of the digits



[Watch Video Solution](#)

**64.** A purse contains a certain number of coins of denominations Rs 1 and 25 paise. The total value of the coins (in Rs) is 6 less than the total number of coins. Find the number of 25 paise coins



[Watch Video Solution](#)

**65.** Rs  $x$  is divided among Mr Bilhari, Mr Narahari, and Mr Murahari. The share of Bilhari is one-fourth of the total money, the share of Murahari is one-third of the remaining money and the share of Narahari is Rs 1200. Find  $x$



[Watch Video Solution](#)



## Concept Application Level I

1. The root of the equation  $\frac{3}{4}p + 8 = 17$  is \_\_\_\_\_

A. 5

B. 12

C. 20

D. 11

**Answer: B**



[Watch Video Solution](#)

2. Find the solution of the equation  $3x - 4 = 5$ ?

A.  $x = 5$

B.  $x = 4$

C.  $x = 2$

D.  $x = 3$

**Answer: D**



**Watch Video Solution**

3. If  $\frac{p}{4} + \frac{p}{5} = 6$ , then  $p = \underline{\hspace{2cm}}$



**Watch Video Solution**

4. If  $a = 3$ , then  $9a + 1.5 = \underline{\hspace{2cm}}$ .



**Watch Video Solution**

5. If  $\frac{0.2}{x} + 0.1 \geq 2.1$ , then  $x \leq$  \_\_\_\_\_

A. 1

B. 0.1

C. 2

D. 0.2

**Answer: B**



[Watch Video Solution](#)

6. If  $\frac{x}{12} + \frac{1}{2} = x - 5$ , then  $x =$  \_\_\_\_.

A. 2

B. 4

C. 8

D. 6

**Answer: D**

 [Watch Video Solution](#)

7. If  $1.7y + 2.3y = 2$ , then  $y = \underline{\hspace{1cm}}$ .

A.  $1/4$

B.  $1/2$

C. 8

D. 6

**Answer: B**

 [Watch Video Solution](#)

8. If  $5\left(\frac{a}{6} + \frac{1}{2}\right) = 5a - 10$ , then  $a =$  \_\_\_\_\_.

A. 3

B.  $1/3$

C. 6

D.  $1/6$

**Answer: A**



[Watch Video Solution](#)

9. If  $\frac{1}{x} + \frac{3}{x} = \frac{11}{3}$ , the  $x =$  \_\_\_\_\_.

A.  $11/3$

B.  $2/3$

C.  $12/11$

**Answer: C**

 [Watch Video Solution](#)

10. If  $9.1x + 3x + 1.9x \leq 42$ , the  $x \leq$  \_\_\_\_\_

A. 1

B. 3

C. 5

D. 4

**Answer: B**

 [Watch Video Solution](#)

11. If  $5z + 1.5(0.5z + 10) \geq 590$ , then  $z \geq$

A. 15

B. 100

C. 150

D. 200

**Answer: B**



[Watch Video Solution](#)

12. If  $8.3x - 9.8 = x + 26.7$ , then  $x =$  \_\_\_\_\_

A. 2

B. 3

C. 4

D. 5

**Answer: D**



**Watch Video Solution**

13. If  $3(a - 2) - 2(a + 9) = 1$ , then  $a =$  \_\_\_\_\_

A. 20

B. 22

C. 25

D. 27

**Answer: C**



**Watch Video Solution**



14. If  $2(x - 5) = \frac{x}{2} + 5$ , then  $x = \underline{\hspace{2cm}}$ .

A. 8

B. 9

C. 10

D. 11

**Answer: C**



[Watch Video Solution](#)

15. Find the value of  $p$ :  $3p - 4 = -16$

A.  $-3$

B.  $-4$

C.  $-5$

D. 4

**Answer: B**



**Watch Video Solution**

16. Solve for  $a$ ,  $\frac{a}{6} + 29 = 36$

A. 30

B. 42

C. 90

D. 120

**Answer: B**



**Watch Video Solution**

17. Solve for  $p$ :  $p - 5p - 6 = 8p - 4$

A.  $-1/3$

B.  $-1/6$

C.  $1/3$

D.  $2/3$

**Answer: B**



[Watch Video Solution](#)

18. Solve for  $k$ :  $1.5k - 3.7 = 0.8$

A. 7

B. 6

C. 5

Answer: D

 Watch Video Solution

19. Solve :  $\frac{3x + 4}{7} - \frac{x + 5}{14} = \frac{x}{28} + \frac{x + 1}{14}$

The following steps are involved in solving the above problem.

Arrange them in sequential order

(A)  $5x + 3 = \frac{3x + 2}{2} \Rightarrow 10x + 6 = 3x + 2$

(B)  $\Rightarrow 7x = -4$

(C) Given  $\frac{3x + 4}{7} - \frac{x + 5}{14} = \frac{x}{28} + \frac{x + 1}{14}$   
 $\Rightarrow \frac{6x + 8 - x - 5}{14} = \frac{x + 2x + 2}{28}$

(D)  $\Rightarrow x = -\frac{4}{7}$

A. ABCD

B. CADB

C. CABD

D. BCAD

**Answer: C**



**Watch Video Solution**

**20.** Two-third of a certain number exceeds one-third of the number by 10. Find the number. The following steps are involved in solving the above problem. Arrange them in sequential order

(A)  $\frac{2x}{3} - \frac{x}{3} = 10$  (given)

(B)  $\frac{2x - x}{3} = 10 \Rightarrow \frac{x}{3} = 10$

(C)  $\Rightarrow x = 30$

(D) Let the number be  $x$

A. DACB

B. BDAC

C. ADBC

D. DABC

**Answer: D**



**Watch Video Solution**

21. Solve :  $\frac{7x + 3}{4} + \frac{9x - 5}{8} = \frac{16x - 3}{16}$

The following steps are involved in solving the above problem.

Arrange them in sequential order

(A)  $x = \frac{-5}{30} = \frac{-1}{6}$

(B)

$$\frac{7x + 3}{4} + \frac{9x - 5}{8} = \frac{16x - 3}{16} \Rightarrow \frac{14x + 6 + 9x - 5}{8} = \frac{16x - 3}{16}$$

(C)  $\frac{23x + 1}{8} = \frac{16x - 3}{16} \Rightarrow 23x + 1 = \frac{16x - 3}{2}$

(D)  $46x + 2 = 16x - 3 \Rightarrow 30x = -5$

A. BCDA

B. CBDA

C. BCAD

D. BDCA

**Answer: A**



**Watch Video Solution**

22. One-third of a certain number exceeds  $\frac{1}{9}$ th of the number by 20. Find the number.

The following steps are involved in solving the above problem.

Arrange them in sequential order

(A) Let the number  $x$

$$(B) \frac{2x}{9} = 20 \Rightarrow \frac{x}{9} = 10 \Rightarrow x = 90$$

$$(C) \text{ Given } \frac{x}{3} - \frac{x}{9} = 20$$

$$(D) \frac{3x - x}{9} = 20$$

A. ABCD

B. ACDB

C. DACB

D. CADB

**Answer: B**



**Watch Video Solution**



**Column A**

If  $\frac{17}{3}x + 20 = 71$ , then  $x =$

\_\_\_\_\_.

The root of the equation  $\frac{4}{5}x + 9 = 2x - 3$  is \_\_\_\_\_.

The solution set of  $\frac{y}{6} + \frac{4}{5} < 2$  is \_\_\_\_\_.

If 69 is divided into two parts such that one part is twice the other, then the greater part is \_\_\_\_\_.

**Column B**

(a)  $y < \frac{36}{5}$

(b) 9

(c)  $y > \frac{36}{5}$

(d) 10

(e) 46

(f) 23

23.



Watch Video Solution

**Column A**

27. If  $\frac{15}{2}y + 10 = -5$ , then  $y =$  \_\_\_\_.
28. The root of the equation  $\frac{7}{2}x + 2 = 14 + 3x$  is \_\_\_\_.
29. The solution set  $\frac{x}{5} + 4 > 5$  of is \_\_\_\_.
30. If 96 is divided into two parts such that one part is twice the other, then the greater part is \_\_\_\_.

**Column B**

- (a)  $x > 5$
- (b) 64
- (c) -2
- (d) 2
- (e) 24
- (f)  $x < 5$

24.



Watch Video Solution

**Concept Application Level II**

1. If  $\frac{9x - 5}{7} + \frac{6 - 3x}{2} = 3$ , then  $x =$  \_\_\_\_\_.

A.  $2/3$

B.  $3/4$

C.  $5/4$

D.  $4/3$

**Answer: D**



**Watch Video Solution**

2. If  $2\gamma + 7 + 3(5 - 2\gamma) = 12$ , then  $\gamma =$  \_\_\_\_\_

A.  $1/6$

B. 11

C.  $5/2$

D. 7

**Answer: C**



**Watch Video Solution**

3. If  $\frac{z + 5}{7} + \frac{4(z - 11)}{9} + 3 = 0$ , then  $z =$  \_\_\_\_\_

A. 1

B. 2

C. -4

D. 5

**Answer: B**



**Watch Video Solution**

4. If  $\frac{0.3(3x - 4)}{5} + \frac{0.4x + 3.6}{5} = 3.5x$  then  $x = \underline{\hspace{2cm}}$

A. 0.1

B. 0.3

C. 0.5

D. 0.2

**Answer:**



**Watch Video Solution**

5. If  $\frac{2x + 3}{6} + \left(\frac{2x - 3}{3}\right) = 3$ , then the value of x is \_\_\_\_.

A.  $7/2$

B. 3

C. 1

D.  $-2$

**Answer: A**



**Watch Video Solution**

6. Two-third of a number exceeds one-third of the number by 10.

Find the number

A. 10

B. 20

C. 30

D. 40

**Answer: C**



[Watch Video Solution](#)

7. A number is doubled and half of the number is added to it. If 10 is subtracted from the result, then we get a number which is one less than the original number. Find the original number

A. 5

B. 6

C. 7

D. 8

**Answer: B**



**Watch Video Solution**

**8.** If a number is multiplied by 5 and 5 is added to it, then the result is equal to 50. Find the number

A. 8

B. 7

C. 6

D. 9

**Answer: A**



**Watch Video Solution**

9. If seven times a number is added to one-fifth of itself, then five-sixth of the sum is equal to 30. Find the number

A. 5

B. 6

C. 15

D. 40

**Answer: A**



**Watch Video Solution**



10. If one-fourth, half, and one-third of a number are added to the number itself, then the result is equal to 25. Find the number

A. 10

B. 11

C. 12

D. 14

**Answer: C**



[Watch Video Solution](#)

11. Solve for  $y$ :  $\frac{y}{5} + \frac{y}{7} = 12$

A. 70

B. 140

C. 35

D. 105

**Answer: C**



**Watch Video Solution**

12. Solve for x:  $\frac{5x - 3}{2x + 3} = \frac{1}{2}$

A. -4

B. 3

C.  $\frac{9}{8}$

D. -2

**Answer: C**



**Watch Video Solution**

13. Solve for  $\gamma$ :  $3(\gamma - 4) - 5(\gamma + 5) = -21$

A.  $-4$

B.  $-7$

C.  $-3$

D.  $-8$

**Answer: D**



[Watch Video Solution](#)

14. Two-third of a number is 32 less than three-fifth of the number. Find the number

A. 360

B.  $-480$

C.  $-260$

D.  $480$

**Answer: B**



**Watch Video Solution**

**15.** If one third of a number is subtracted from three times the number, then the result is 800, find the number.

A. 300

B. 400

C. 200

D. 600

**Answer: A**



**Watch Video Solution**

**16. Solve:  $7y - 3 \leq 2y + 14, y \in W$ .**

A. 0, 1, 2

B. 1, 2, 3

C. 0, 1, 2, 3

D. 1, 2, 3, 4

**Answer: C**



**Watch Video Solution**

17. In a two-digit number, the tens digit is twice the units digit. If the sum of its digits is 9. Find the number

A. 63

B. 82

C. 72

D. 36

**Answer: A**



[Watch Video Solution](#)

18. The present age of a man is seven times the present age of his son. Two years ago, the age of the man was eleven times the age of the son. Find the present age of the man (in years)

A. 35

B. 26

C. 47

D. 45

**Answer: A**



[Watch Video Solution](#)

**19.** The present age of A is thrice that of B. Five years from now, A's age will be 8 years more than twice B's age. Find the present age of B (in years)

A. 10

B. 13

C. 12

D. 15

**Answer: B**

 [Watch Video Solution](#)

**20.** The sum of the present ages of Ram and Shyam is 75 years. Ten years ago, Ram's age was 4 times the age of Shyam. Find the difference between their present ages (in years)

A. 22

B. 23

C. 33

D. 30

**Answer: C**

 [Watch Video Solution](#)



21. A road divider of certain length is painted one-sixth yellow, three-fifth black, and the remaining 28m is painted white. Find the length of the divider

- A. 100 m
- B. 120 m
- C. 150 m
- D. 92m

**Answer: B**



Watch Video Solution

22. Mr Sumanth spends two-fifth of his salary on house rent and one-fourth on food. After spending Rs 2000 on miscellaneous, if he could save an amount of Rs 5000, then find his monthly income (in Rs)

A. 20000

B. 25000

C. 15000

D. 16000

**Answer: A**



[Watch Video Solution](#)

23. In a two-digit number, the units digit is 3 more than the ten's digit. The sum of the digits is 18 less than the original number.

Find the product of the digits

A. 54

B. 40

C. 10

D. 28

**Answer: C**



[Watch Video Solution](#)

**24.** A number is added to two-third of itself, 1 is subtracted from the sum and the result is divided by 12. If the final result is 12, then find the numbers.

A. 20

B. 87

C. 84

D. 74

**Answer: B**



**Watch Video Solution**

**25.** The present age of A is 4 years less than twice the present age of B. B's present age is 6 years more than twice his age 15 years ago. Find the difference of their ages

A. 30 years

B. 32 years

C. 20 years

D. 22 years

**Answer: C**



**Watch Video Solution**

**26.** A mother said that, her age is one year less than thrice her daughter's age. The daughter is 9 years less than the difference between their present ages. Find the sum of their ages (in years)

A. 45

B. 47

C. 39

D. 35

**Answer: C**



**Watch Video Solution**

27. There are two numbers, the difference between them is equal to twice the smaller number. The sum of the two number is 68.

Find the product of the two numbers

A. 867

B. 965

C. 814

D. 986

**Answer: A**



**Watch Video Solution**

28. A student painted a circular region of certain area such that  $\frac{4}{7}$ th of the area was pink,  $\frac{1}{10}$ th area was green, and  $\frac{2}{7}$ th

was yellow. The remaining area of  $6m^2$  was white. Find the area of the region which is painted pink (in sq. units)

- A. 95
- B. 140
- C. 240
- D. 80

**Answer: D**



[Watch Video Solution](#)

**29.** In a two-digit number, tens digit is a multiple of the units digit. The sum of the number and the number formed by reversing the digits is 132. Which of the following can be the product of the two digits ?

A. 27

B. 35

C. 18

D. 16

**Answer: B**



[Watch Video Solution](#)

**30.** There are three house-hold articles. The cost of the first article is two-fifth the cost of the third article and the cost of the third article is twice the cost of second article. If the total cost of the three articles is Rs 228, then find the cost of the first article (in Rs)

A. 40



B. 48

C. 50

D. 54

**Answer: B**



**Watch Video Solution**

**31.** In an isosceles triangle, the difference between one of the equal sides and the unequal side (longest of the three) is  $\frac{3}{10}$  of the sum of the equal sides. If the perimeter of the triangle is 90 cm, then find the length of unequal side in centimetres

A. 40

B. 25

C. 50

D. 80

**Answer: A**



[Watch Video Solution](#)

**32.** Mr Anthony travelled  $\frac{4}{9}$  of a certain distance by bus,  $\frac{1}{3}$  by car, and the remaining 6 km by scooter.

Find the distance by bus (in Km)

A. 12

B. 18

C. 9

D. 27

**Answer: A**



[Watch Video Solution](#)

33. Which of the following is a solution of  $\frac{2x - 5}{3} > \frac{3x + 3}{4}$  ?

A.  $x = -5$

B.  $x = -2$

C.  $x = -29$

D.  $x = -30$

**Answer: D**



Watch Video Solution

34. The unit digit of a two-digit number is 6. If 9 is added to the number, then the number obtained is  $5/4th$  of the number itself. Find the sum of the digits

A. 7

B. 8

C. 9

D. 10

**Answer: C**



**Watch Video Solution**

**35.** A purse contains a certain number of coins of denominations Re. 1 and 50 paise. The total value of the coins (in Rs) is 14 less than the total number of coins. Find the number of 50 paise coins

A. 12

B. 18

C. 22

D. 28

**Answer: D**



**Watch Video Solution**

**36.** Rs  $x$  is divided among A, B and C. The share of A is two-fifth of the total money, the share of B is two-third of the remaining money, and the share of C is Rs 600. Find the value of  $x$

A. 3000

B. 4000

C. 5000

D. 6000

**Answer: A**



**Watch Video Solution**

**37.** Ten years ago, Mohan's age was 35 years less than twice his present age. Find Mohan's present age (in years)

A. 15

B. 20

C. 25

D. 10

**Answer: C**



**Watch Video Solution**

**38.** Ram, Shyam, and Tarun have a total of Rs 600 with them. The amount with Ram is equal to half of the total amount with the others. Find the amount with Ram (in Rs)

A. 150

B. 120

C. 200

D.

**Answer: D**



**Watch Video Solution**

**39.** The difference of the digits of a two-digit number is 8. The sum of its digits can be \_\_\_\_

A. 8

B. 10

C. (c) Either (a) or (b)

D. Neither (a) or (b)

**Answer: C**



**Watch Video Solution**

**40.** Ramesh and Suresh have a total of Rs 200. If Ramesh gives Rs 40 to Suresh, then the amounts with both would get interchanged. Find the amount with Suresh (in Rs)

A. 70

B. 60

C. 50



D. 80

**Answer: D**



**Watch Video Solution**