



MATHS

BOOKS - NCERT EXEMPLAR

SIMPLE EQUATIONS

Example

1. The solution of the equation $3x + 5 = 0$ IS

A. $\frac{-5}{3}$

B. -5

C. $\frac{5}{3}$

D. 5

Answer: A



Watch Video Solution

2. -1 is not a solution of the equation

A. $x + 1 = 0$

B. $x - 1 = 2$

C. $2y + 3 = 1$

D. $2p + 7 = 5$

Answer: B



Watch Video Solution

3. Which of the following equations can be formed using the expression $x = 5$:

A. $2x + 3 = 13$

B. $3x + 2 = 13$

C. $x - 5 = 1$

D. $4x - 9 = 21$

Answer: A



Watch Video Solution

4. Any value of the variable which makes both sides of an equation equal, is known as a _____ of the equation.



Watch Video Solution

5. The root of the equation $y - 13 = 9$ is _____.



Watch Video Solution

6. $2x + \underline{\hspace{2cm}} = 11$ has the solution -4 .



Watch Video Solution

7. 12 is a solution of the equation

$$4x - 5 = 3x + 10$$



Watch Video Solution

8. A number x divided by 7 gives 2 can be

written as $\frac{x + 1}{7} = 2$



Watch Video Solution

9. $x + 2 = 5$ and $3x - 1 = 8$ have the same solutions.



Watch Video Solution

10. The equation $3x + 7 = 10$ has 1 as its solution.



Watch Video Solution

11. One fourth of a number is 20 less than the number itself.



Watch Video Solution

12. On subtracting 13 from 3 times of a number, the result is 8 .



Watch Video Solution

13. Two times a number increased by 5 equals 9.



Watch Video Solution

14. 9 added to twice a number gives 13. Find the number.



Watch Video Solution

15. 1 subtracted from one third of a number gives 1. Find the number.



Watch Video Solution

16. Sum of two numbers is 60, one is four times the other, then the numbers are ___.



Watch Video Solution

17. Solve the riddle “What is too much fun for one, enough for two, and means nothing to three?” The answer to this is hidden in the equations given below.

If $4c = 16$, then $c = ?$ If $4e + 8 = 20$, then $e = ?$

If $2r - 3 = 7$, then $r = ?$ If $3t + 8 = 29$, then $t = ?$

If $2s + 4 = 4s$, then $s = ?$

To get the answer substitute the numbers for the letters it equals in the following: manner :



[Watch Video Solution](#)

18. Solve the following equation

$$10 = 4 + 3(t + 2)$$



[Watch Video Solution](#)

Exercise Choose The Correct Answer Objective Question

1. The solution of the equation $ax + b = 0$ is

A. $\frac{a}{b}$

B. $-b$

C. $-\frac{b}{a}$

D. $\frac{b}{a}$

Answer: C



Watch Video Solution

2. If a and b are positive integers, then the solution of the equation $ax = b$ will always be a

A. positive number

B. negative number

C. 1

D. 0

Answer: A



Watch Video Solution

3. Which of the following is not allowed in a given equation?

A. Adding the same number to both sides of the equation.

B. Subtracting the same number from both sides of the equation.

C. Multiplying both sides of the equation by the same non-zero number.

D. Dividing both sides of the equation by
the same number.

Answer:



Watch Video Solution

4. The solution of which of the following equations is neither a fraction nor an integer?

A. $2x + 6 = 0$

B. $3x - 5 = 0$

C. $5x - 8 = x + 4$

D. $4x + 7 = x + 2$

Answer:



Watch Video Solution

5. The equation which cannot be solved in integers is

A. $5y - 3 = -18$

B. $3x - 9 = 0$

C. $3z + 8 = 3 + z$

D. $9y + 8 = 4y - 7$

Answer:



Watch Video Solution

6. If $7x + 4 = 25$.then x is equal to

A. $\frac{29}{7}$

B. $\frac{100}{7}$

C. 2

D. 3

Answer:



Watch Video Solution

7. The solution of the equation

$$3x + 7 = -20 \text{ is}$$

A. $\frac{17}{7}$

B. -9

C. 9

D. $\frac{13}{9}$

Answer:



Watch Video Solution

8. The value of y for which the expressions $(y - 15)$ and $(2y + 1)$ become equal is

A. 0

B. 16

C. 8

D. -16

Answer:



Watch Video Solution

9. If $k + 7 = 16$, then the value of $8k - 72$ is

A. 0

B. 1

C. 112

D. 56

Answer:



Watch Video Solution

10. If $43m = 0.086$, then the value of m is

A. 0.002

B. 0.02

C. 0.2

D. 2

Answer:



Watch Video Solution

11. x exceeds 3 by 7, can be represented as

A. $x + 3 = 2$

B. $x + 7 = 3$

C. $x - 3 = 7$

D. $x - 7 = 3$

Answer:



Watch Video Solution

12. The equation having 5 as a solution is:

A. $4x + 1 = 2$

B. $3 - x = 8$

C. $x - 5 = 3$

D. $3 + x = 8$

Answer:



Watch Video Solution

13. The equation having -3 as a solution is

A. $x + 3 = 1$

B. $8 + 2x = 3$

C. $10 + 3x = 1$

D. $2x + 1 = 3$

Answer:



Watch Video Solution

14. Which of the following equations can be formed starting with $x = 0$?

A. $2x + 1 = -1$

B. $\frac{x}{2} + 5 = 7$

C. $3x - 1 = -1$

D. $3x - 1 = 1$

Answer:



Watch Video Solution

15. Which of the following equations cannot be formed using the equation $x = 7$?

A. $2x + 1 = 15$

B. $7x - 1 = 50$

C. $x - 3 = 4$

D. $\frac{x}{7} - 1 = 10$

Answer:



Watch Video Solution

16. If $\frac{x}{2} = 3$, then the value of $3x + 2$ is

A. 20

B. 11

C. $\frac{13}{2}$

D. 8

Answer:



Watch Video Solution

17. Which of the following numbers satisfy the equation $-6 + x = -12$?

A. 2

B. 6

C. -6

D. -2

Answer:



Watch Video Solution

18. Shifting one term from one side of an equation to another side with a change of sign is known as

A. commutativity

B. transposition

C. distributivity

D. associativity

Answer:



Watch Video Solution

Exercise Fill In The Blanks

1. The sum of two numbers is 18 and their difference is 16. Find the two numbers.



[Watch Video Solution](#)

2. The sum of two numbers is 60 and their difference is 30.

If smaller number is x .

The difference of numbers in term of x is

_____.



Watch Video Solution

3. The sum of two numbers is 60 and their difference is 15. Then the equation formed is _____.



Watch Video Solution

4. The sum of two numbers is 56 and their difference is 22. Then the solution of the equation is _____.



[Watch Video Solution](#)

5. Substitute the values and find the solution for the equation $3x + 5$ is equal to 23.



[Watch Video Solution](#)

6. Sum of two numbers is 81. One is twice the other.

If smaller number is x , the other number is _____.



[Watch Video Solution](#)

7. Sum of two numbers is 81. One is twice the other. Then the equation formed is _____.



[Watch Video Solution](#)

8. The sum of two numbers is 43 and their difference is 23. The solution of the equation is _____.



[Watch Video Solution](#)

9. The sum of two numbers is 60 and their difference is 30. Then the numbers are _____ and _____ .



Watch Video Solution

10. In a test Abha gets twice the marks as that of Palak. Two times Abha's marks and three times Palak's marks make 280.

If Palak gets x marks, Abha gets _____ marks.

A. 80

B. 40

C. 60

D. 100

Answer: A



Watch Video Solution

11. The sum of two numbers is 73 and their difference is 55. The equation formed is _____.



Watch Video Solution

12. The sum of two numbers is 60 and their difference is 30. Then the solution of the equation is _____ .



Watch Video Solution

13. Marks obtained by Abha are _____.



Watch Video Solution

14. The length of a rectangle is two times its breadth. Its perimeter is 60 cm.

If the breadth of rectangle is x cm, the length of the rectangle is _____.



Watch Video Solution

15. Perimeter in terms of x is _____.



Watch Video Solution

16. The equation formed is _____.



[Watch Video Solution](#)

17. The solution of the equation is _____.



[Watch Video Solution](#)

18. In a bag there are 5 and 2 rupee coins. If they are equal in number and their worth is Rs

70, then

The worth of x coins of Rs 5 each _____.



Watch Video Solution

19. The worth of x coins of Rs 2 each _____.



Watch Video Solution

20. The equation formed is _____.



Watch Video Solution

21. A bag contains 15 one rupee coins, 25 two rupee coins and 10 five rupee coins. There are _____ 5 rupee coins and _____ 2 rupee coins.



[Watch Video Solution](#)

22. In a Mathematics quiz, 30 prizes consisting of 1st and 2nd prizes worth Rs 2000 and Rs 1000, respectively are to be given. If the total

prize money is Rs 52,000, then the number of first and second prizes to be given are_____.



[Watch Video Solution](#)

23. In a Mathematics quiz, 30 prizes consisting of 1st and 2nd prizes only are to be given. 1st and 2nd prizes are worth Rs 2000 and Rs1000, respectively. If the total prize money is Rs 52,000 then show that:

(b)The total value of prizes in terms of x are _____.



[Watch Video Solution](#)

24. Write all the natural numbers from 2 to 13.

What fraction of them are prime numbers?



[Watch Video Solution](#)

25. The solution of the equation $3x - 2 = 7$ is

_____.



[Watch Video Solution](#)

26. If the sum of two numbers is 39, and one exceeds the other by 11, then the two numbers are ____.



[Watch Video Solution](#)

27. If $z + 3 = 5$, then $z =$ _____.



[Watch Video Solution](#)

28. _____ is the solution of the equation $3x - 2 = 7$.



Watch Video Solution

29. _____ is the solution of $3x + 10 = 7$.



Watch Video Solution

30. If $2x + 3 = 5$, then value of $3x + 2$ is

_____ .



Watch Video Solution

31. In integers, $4x - 1 = 8$ has _____ solution .



Watch Video Solution

32. In natural numbers, $4x + 5 = -7$ has _____ solution.



Watch Video Solution

33. In natural numbers, $x - 5 = -5$ has _____ solution.



Watch Video Solution

34. In whole numbers, $x + 8 = 12 - 4$ has _____ solution.



Watch Video Solution

35. If 5 is added to three times a number, it becomes the same as 7 is subtracted from four times the same number. This fact can be represented as _____ .





Watch Video Solution

36. $x + 7 = 10$ has the solution _____.



Watch Video Solution

37. $x - 0 =$ _____ when $3x = 12$.



Watch Video Solution

38. $x - 1 =$ _____ when $2x = 2$.





Watch Video Solution

39. $x - \underline{\hspace{2cm}} = 15$: when $\frac{x}{2} = 6$.



Watch Video Solution

40. The solution of the equation $x + 15 = 19$
is .



Watch Video Solution

41. Finding the value of a variable in a linear equation that _____ the equation is called a _____ of the equation.



Watch Video Solution

42. Any term of an equation may be transposed from one side of the equation to the other side of the equation by changing the _____ of the term.



Watch Video Solution

43. If $\frac{9}{5}x = \frac{18}{5}$, then $x = \underline{\hspace{2cm}}$.



Watch Video Solution

44. If $3 - x = -4$, then $x = \underline{\hspace{2cm}}$.



Watch Video Solution

45. If $x - \frac{1}{2} = -\frac{1}{2}$, then $x = \underline{\hspace{2cm}}$.



Watch Video Solution

46. If $\frac{1}{6} - x = \frac{1}{6}$, then $x =$ _____.



[Watch Video Solution](#)

47. If 10 less than a number is 65, then the number is _____.



[Watch Video Solution](#)

48. If a number is increased by 20, it becomes 45. Then the number is _____.



Watch Video Solution

49. If 84 exceeds another number by 12, then the other number is _____.



Watch Video Solution

50. If $x - \frac{7}{8} = \frac{7}{8}$, then $x =$ _____.



Watch Video Solution

Exercise True False

1. 5 is the solution of the equation $3x + 2 = 17$.



Watch Video Solution

2. $\frac{9}{5}$ is the solution of the equation $4x - 1 = 8$.



Watch Video Solution

3. $4x - 5 = 7$ does not have an integer as its solution.



[Watch Video Solution](#)

4. One third of a number added to itself gives 10, can be represented as $\frac{x}{3} + 10 = x$.



[Watch Video Solution](#)

5. $\frac{3}{2}$ is the solution of the equation $8x - 5 = 7$.



[Watch Video Solution](#)

6. If $4x - 7 = 11$, then $x = 4$.



[Watch Video Solution](#)

7. If 9 is the solution of variable x in the equation $\frac{5x - 7}{2} = y$, then the value of y is

28.



Watch Video Solution

Exercise

1. Match each of the equation in Column I with the appropriate entries in Column II.

Column I

(i) $x + 5 = 9$

(ii) $x - 7 = 4$

(iii) $\frac{x}{12} = -5$

(iv) $5x = 30$

(v) The value of y which satisfies $3y = 5$

(vi) If $p = 2$, then the value of $\frac{1}{3}(1 - 3p)$

Column II

(A) $-\frac{5}{3}$

(B) $\frac{5}{3}$

(C) 4

(D) 6

(E) 11

(F) -60

(G) 3



[Watch Video Solution](#)

2. 13 subtracted from twice of a number gives
3



[Watch Video Solution](#)

3. One-fifth of a number is 5 less than that
number.



[Watch Video Solution](#)

4. A number is 7 more than one-third of itself.



[Watch Video Solution](#)

5. Six times a number is 10 more than the number.



[Watch Video Solution](#)

6. If 10 is subtracted from half of a number, the result is 4.





[Watch Video Solution](#)

7. Subtracting 5 from p , the result is 2.



[Watch Video Solution](#)

8. Five times a number increased by 7 is 27



[Watch Video Solution](#)

9. Mohan is 3 years older than Sohan. The sum of their ages is 43 years



Watch Video Solution

10. If 1 is subtracted from a number and the difference is multiplied by $\frac{1}{2}$, the result is 7.



Watch Video Solution

11. A number divided by 2 and then increased by 5 is 9.



Watch Video Solution

12. The sum of twice a number and 4 is 18.



Watch Video Solution

13. The age of Sohan Lal is four times that of his son Amit. If the difference of their ages is

27 years, find the age of Amit.

A. 9 Years

B. 10 Years

C. 11 Years

D. 12 Years

Answer: A



Watch Video Solution

14. A number exceeds the other number by 12.

If their sum is 72, find the numbers.



Watch Video Solution

15. Seven times a number is 12 less than thirteen times the same number. Find the number.

A. 3

B. 2

C. 4

D. 5

Answer: B



[Watch Video Solution](#)

16. The interest received by Karim is Rs 30 more than that of Ramesh. If the total interest received by them is Rs 70, find the interest received by Ramesh.



[Watch Video Solution](#)

17. Subramaniam and Naidu donate some money in a Relief Fund. The amount paid by Naidu is Rs. 125 more than that of Subramaniam. If the total money paid by them is Rs 975, find the amount of money donated by Subramaniam.



[Watch Video Solution](#)

18. In a school, the number of girls is 50 more than the number of boy The total number of students is 1070. Find the number of girls.



Watch Video Solution

19. Two times a number increased by 5 equals 9. Find the number.



Watch Video Solution

20. 9 added to twice a number gives 13. Find the number.



Watch Video Solution

21. 1 subtracted from one-third of a number gives 1. Find the number.



Watch Video Solution

22. After 25 years, Rama will be 5 times as old as he is now. Find his present age .



Watch Video Solution

23. After 20 years, Manoj will be 5 times as old as he is now. Find his present age

A. 2 years

B. 3 years

C. 4 years

D. 5 years

Answer: D



Watch Video Solution

24. My younger sister's age today is 3 times what it will be 3 years from now minus 3 times what her age was 3 years ago. Find her present age.



Watch Video Solution

25. If 45 is added to half a number, the result is triple the number. Find the number .



Watch Video Solution

26. In a family, the consumption of wheat is 4 times that of rice. The total consumption of the two cereals is 80 kg. Find the quantities of rice and wheat consumed in the family.



Watch Video Solution

27. In a bag, the number of one rupee coins is three times the number of two rupees coins. If the worth of the coins is Rs 120, find the number of 1 rupee coins.



[Watch Video Solution](#)

28. Anamika thought of a number. She multiplied it by 2, added 5 to the product and obtained 17 as the result. What is the number she had thought of ?



[Watch Video Solution](#)

29. One of the two numbers is twice the other. The sum of the numbers is 12. Find the numbers.



[Watch Video Solution](#)

30. The sum of three consecutive integers is 5 more than the smallest of the integers. Find the integers.



[Watch Video Solution](#)

31. A number when divided by 6 gives the quotient 6. What is the number ?



[Watch Video Solution](#)

32. The perimeter of a rectangle is 40 m. The length of the rectangle is 4m less than 5 times its breadth. Find the length of the rectangle.



[Watch Video Solution](#)

33. Each of the 2 equal sides of an isosceles triangle is twice as large as the third side. If the perimeter of the triangle is 30 cm, find the length of each side of the triangle.



Watch Video Solution

34. The sum of two consecutive multiples of 2 is 18. Find the numbers.



Watch Video Solution

35. Two complementary angles differ by 20° .

Find the angles.



Watch Video Solution

36. 150 has been divided into two parts such that twice the first part is equal to the second part. Find the parts.



Watch Video Solution

37. In a class of 60 students, the number of girls is one third the number of boys. Find the number of girls and boys in the class.



Watch Video Solution

38. Two-third of a number is greater than one-third of the number by 3. Find the number.



Watch Video Solution

39. A number is as much greater than 27 as it is less than 73. Find the number.



Watch Video Solution

40. A man travelled two fifth of his journey by train, one-third by bus one-fourth by car and the remaining 3 km on foot. What is the length of his total journey?



Watch Video Solution

41. Twice a number added to half of itself equals 24. Find the number.



Watch Video Solution

42. Thrice a number decreased by 5 exceeds twice the number by 1 .Find the number.



Watch Video Solution

43. A girl is 28 years younger than her father. The sum of their ages is 50 years. Find the ages of the girl and her father.

A. 11, 39

B. 12, 40

C. 13, 34

D. 14, 44

Answer: A



Watch Video Solution

44. The length of a rectangle is two times its width. The perimeter of the rectangle is 180 cm. Find the dimensions of the rectangle.



Watch Video Solution

45. Look at this riddle? If she answers the riddle correctly how ever will she pay for the

pencils?



Bhaiya, please give me 10 pencils

I will give you one pencil free if you answer my riddle



Really!
Ask the riddle then

If 7 pencils would cost you ₹ 6 more than 5 pencils, then find the cost of your 10 pencils



[Watch Video Solution](#)

46. In a certain examination, a total of 3768 students secured first division in the years 2006 and 2007. The number of first division in 2007 exceeded those in 2006 by 34. How many students got first division in 2006 ?



[Watch Video Solution](#)

47. Radha got Rs. 17,480 as her monthly salary and over-time. Her salary exceeds the over-time by Rs10, 000. What is her monthly salary ?



[Watch Video Solution](#)

48. If one side of a square is represented by $18x - 20$ and the adjacent side is represented

by $42 - 13x$, find the length of the side of the square .



[Watch Video Solution](#)

49. If one of the angles of the triangle is 60° and the other two are such that one is triple the other, then the remaining angles of the triangle are.



[Watch Video Solution](#)

50. What does a duck do when it flies upside down? The answer to this riddle is hidden in the equation given below:

If $i + 69 = 70$, then $i = ?$ If $8u = 6u + 8$,
then $u = ?$

If $4a = -5a + 45$, then $a = ?$ If $4q + 5 = 17$,
then $q = ?$

If $-5t - 60 = -70$ then $t = ?$ If
 $\frac{1}{4}s + 98 = 100$, then $s = ?$

If $\frac{5}{3}p + 9 = 24$ then $p = \underline{\hspace{2cm}}$?

If $3c = c + 12$, then $c = \underline{\hspace{2cm}}$?

If $3(k + 1) = 24$, then $k = \underline{\hspace{2cm}}$?

For riddle answer : substitute the number for the letter it equals

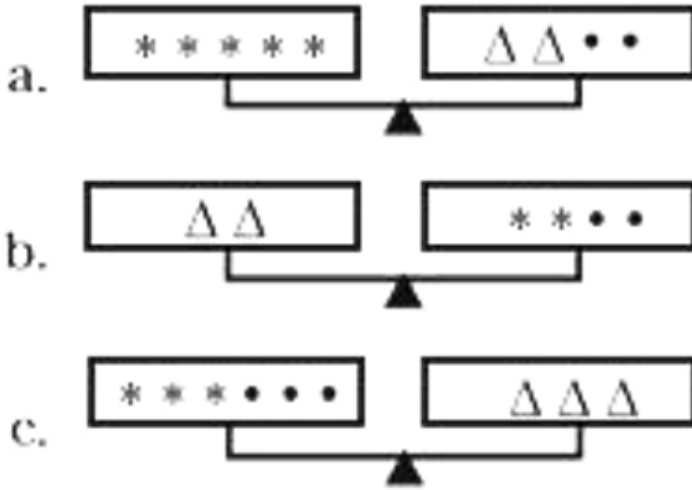
$$\frac{\quad}{1} \quad \frac{\quad}{2} \quad \frac{\quad}{3} \quad \frac{\quad}{4} \quad \frac{\quad}{5} \quad \frac{\quad}{6} \quad \frac{\quad}{7} \quad \frac{\quad}{8} \quad \frac{\quad}{4} \quad \frac{\quad}{9}$$



[Watch Video Solution](#)

51. The three scales below are perfectly balanced if $\bullet = 3$. What are the values of Δ and

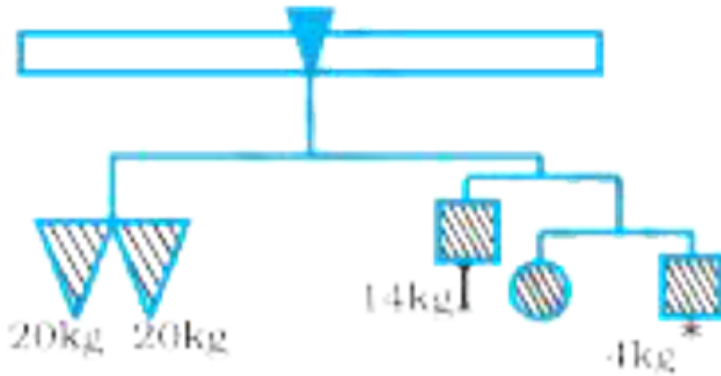
* ?



Watch Video Solution

52. The given figure represents a weighing balance. The weights of some objects in the balance are given. Find the weight of each

square and the circle .



[▶ Watch Video Solution](#)

Thick And Discuss

1. Solve for x: $\frac{8x - 1}{2} + 3x - 4 = \frac{1 + 2x}{3}$

[▶ Watch Video Solution](#)

2. If sum of two numbers is 31 and their difference is 23, then the two numbers are ____.



[Watch Video Solution](#)

3. Describe how you would solve $4(x-2) = 16$.



[Watch Video Solution](#)

4. Condition to check solution of simultaneous linear equations.



[Watch Video Solution](#)

5. SIGNIFICANT FIGURES



[Watch Video Solution](#)

6. Express $5 + 7n$ in words in at least two different ways.



Watch Video Solution