

EduFest Academy, Pune
Simple Equation in One Variable

Multiple Choice Questions (MCQs)

1. The solution of $2x - 3 = 7$ is:
a) 2 b) -2 c) 5 d) -5
2. Which of the following is not a linear equation.
a) $2x + 5 = 1$ c) $y + 1 = 0$
b) $x - 1 = 0$ d) $5x + 3$
3. The present age of Sahil's mother is three times the present age of Sahil. After 5 years their ages will add to 66 years. Find the present age of Sahil.
a) 12 b) 14 c) 16 d) 20
4. Find the solution of $2x + 3 = 7$
a) 2 c) 3
b) -2 d) None of these
5. Solve: $8x = 20 + 3x$
a) 4 c) 2
b) -4 d) None of these
6. Solve: $\frac{2}{3}x + 1 = \frac{7}{3}$
a) 2 c) 3
b) -2 d) None of these
7. Solve: $\frac{x}{4} + \frac{x}{6} = x - 7$
a) 12 c) 3
b) -12 d) None of these
8. Find the solution of $\frac{3x+5}{2x+1} = \frac{1}{3}$
a) 2 c) 3
b) -2 d) None of these
9. Find the solution of $\frac{x+6}{4} + \frac{x-3}{5} = \frac{5x-4}{8}$
a) 8 c) 4
b) -8 d) None of these
10. Solve: $8x + 3 = 27$
a) 3 c) 2
b) -3 d) None of these
11. Solve: $5x - 7 = 2x + 8$
a) 5 b) -9 c) 5 d) 9
12. The perimeter of a rectangle is 13 cm and its width is $2\frac{3}{4}$ cm. Find its length in cm
a) $3\frac{3}{4}$ c) $2\frac{3}{4}$
b) $-3\frac{3}{4}$ d) None of these
13. Two numbers are in the ratio 5 : 3. If they differ by 18, what are the numbers?
a) 45, 27 c) 40, 22
b) 50, 32 d) None of these
14. Solve: $2x - 3 = x + 2$
a) 5 b) -9 c) 5 d) 9
15. Solve: $3x = 2x + 18$

- a) 18
b) -18
16. Solve: $5t - 3 = 3t - 5$
a) 1
b) -1
17. Solve: $5x + 9 = 5 + 3x$
a) 2
b) -2
18. Solve: $4z + 3 = 6 + 2z$
a) $\frac{3}{2}$
b) $-\frac{3}{2}$
19. Solve: $2x - 1 = 14 - x$
a) 5
b) -9
20. Solve: $8x + 4 = 3(x - 1) + 7$
a) 1
b) -1
- c) 14
d) None of these
- c) 2
d) None of these
- c) 3
d) None of these
- c) 2
d) None of these
- c) 5
d) 9
- c) 0
d) None of these

VERY SHORT ANSWER TYPE QUESTIONS

- Tell which of the following is a linear equation in one variable:
a) $x^2 - 4x + 3 = 0$
b) $6x - 2y = 7$
c) $3x - 1 = -2x$
d) $pq - 3 = p$
e) $3x + 2 = 4(x+7) + 9$
- Find the value of x:
a) $3 + \frac{x}{4} = 5$
b) $\frac{x}{2} - \frac{x}{3} = 4$
c) $ax + b = 0$ where a, b are any integers
d) $\frac{50}{x} + 4 = 14$
- Half a number increased by 10 is 12. Find the number. $-\frac{x}{2} + 10 = 12$
- Twice the sum of two numbers is 36. If one of the numbers is 10, find the other number.
- Twenty years from now, I will be 4 times as old as my present age. What is my present age?
- State whether the following statements are true or false:
a) A term may be transposed from one side of the equation to the other side but its sign will not change.
b) We cannot subtract the same number from both sides of an equation.
c) $x = 1$ is the solution of equation $4(x + 5) = 24$

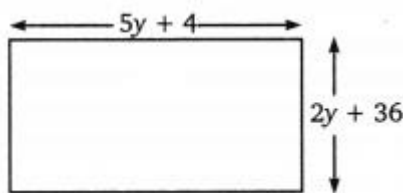
Short Answer Type Questions

- Interior angles of a triangle are in the ratio 2 : 3 : 4. Find the angles of the triangle.
- If father is twice as old as his son and also 32 years older than his son. What is the age of father?
- Solve for: $8x + 25 = 4x + 105$
- Sides of rectangle are in the ratio 15 : 4. If the perimeter of the rectangle is 38 cms then find the sides of rectangle.
- Form an equation of '7 added to thrice a number is 118 and also find the number.

6. If sum of two numbers is 29 and one of them is 18. Form the equation for finding the another number.

Long Answer Type Questions

1. A number consists of two digits whose sum is 9. If 9 is added to the number its digits are inter changed. Find the number.
2. The sum of the two number is 5 and difference of their squares is 5. Find the difference of the numbers?
3. The sum of four consecutive natural numbers is 166. What are the numbers?
4. A man ,¹x. He gave half of it to his wife, $\frac{1}{4}$ th to his son and ,¹ 1200 of his daughter. Form an equation and also find x.
5. For what value of y is the perimeter of shape 220 cm?



6. The two perpendicular sides of a right angled triangle are in the ratio 3:4 and it's perimeter is 96 cm. Find the three sides.
7. Two supplementary angles differ by 50° . Find measure of each angle.
8. Sum of three consecutive even numbers is 36. Find the numbers.
9. The numerator of a fraction is 2 less than the denominator. If 3 is added to both the numerator the fraction becomes $\frac{3}{4}$. Find the fraction.
10. A number consists of two digits whose sum is 12. If 18 is added to the number, the digits are reversed. Find the number.
11. Maira has a total of Rs.1040 as currency notes in the denomination of Rs.10, Rs.20 and Rs.50. The ratio of the number of Rs.10 notes and Rs.20 notes is 2:5. If she has a total of 30 notes, how many notes of each denomination she has.
12. A number is such that ratio of 84 less than the number and difference of 108 and the number is 1:1. Find the number.
13. Mr. X has to cover a certain distance. He covers $\frac{2}{5}$ th of the total distance by car, $\frac{3}{10}$ th by bus, $\frac{1}{5}$ th by autorickshaw and the remaining 5km on foot. What is the total distance?