

Question Bank

1. CHOOSE THE CORRECT ANSWER.

- a. Linear equations are of which degree?
- i. degree 0 ii. degree 2
iii. degree 1 iv. any degree
- b. Which of the following is a linear equation?
- i. $x^2 + x - 9 = 0$ ii. $\sqrt{x} + 8 = 0$
iii. $5x + 15 = 0$ iv. $\frac{1}{x^2} + 5 = 0$
- c. Which of the following is the solution for $2x - 10 = 0$?
- i. $x = 0$ ii. $x = 5$
iii. $x = 10$ iv. $x = -5$
- d. In an isosceles triangle, the equal angles are of 45° each. What is the third angle?
- i. 30° ii. 45° iii. 60° iv. 90°
- e. A line of length 40 cm is divided into two parts. If one part has a length which is three times the length of the other part, what is the length of the smaller part?
- i. 5 cm ii. 10 cm
iii. 20 cm iv. 30 cm
- b. For a number, adding 20 gives the same result as multiplying by 3. Find the number.
- c. Three consecutive even numbers add up to 24. Find them.
- d. The numerator of a fraction is 7 less than its denominator. If the denominator is increased by 1, the fraction becomes $\frac{1}{3}$. Find the fraction.
- e. In an isosceles triangle, each equal side is twice the unequal side. If the perimeter is 30 cm, find the three sides.
- f. The length of a rectangle is 2 cm more than its breadth. If the perimeter of the rectangle is 28 cm, find the length and breadth.
- g. The elder of two brothers is 4 years older than the younger. If he is also 3 times as old as the younger, find their ages.
- h. A woman is 3 times as old as her daughter. Five years ago, she was 7 times as old as the daughter. How old are they now?
- i. Imran has some currency notes of denominations ₹10, ₹50 and ₹100. The number of 50-rupee notes is three times the number of 100-rupee notes and the number of 10-rupee notes is four times the number of 100-rupee notes. If the total amount he has is ₹1450, find the number of notes in each denomination.

2. ANSWER THE FOLLOWING.

- a. Solve the following equations:
- i. $3x - 6 = 15$
ii. $3y - 8 = y$
iii. $\frac{x}{2} + 10 = 3$
iv. $\frac{a}{4} + \frac{a}{3} + \frac{a}{6} = 9$
v. $\frac{2x+3}{4} + \frac{x-3}{3} = \frac{7x}{12}$
vi. $\frac{2x}{3} + \frac{4x}{5} = \frac{2x+21}{30}$
vii. $5m - 4 = 2(3m + 2)$
- j. The digit in the hundreds place of a three-digit number is 3 times the digit in the units place; the digit in its tens place is twice the digit in the units place. If the sum of all the three digits is 12, find the number.