

Linear Equations in One Variable

Question 1.

Solve: $3x = 12$

- (a) 15
- (b) 4
- (c) 9
- (d) 3

Answer: (b) 4

Question 2.

Sum of two numbers is 95. If one exceeds the other by 15, find the numbers.

- (a) 40 and 60
- (b) 50 and 55
- (c) 50 and 60
- (d) 40 and 55

Answer: (d) 40 and 55

Question 3.

The sum of two digit number and the number formed by interchanging its digit is 110. If ten is subtracted from the first number, the new number is 4 more than 5 times of the sum of the digits in the first number. Find the first number.

- (a) 46
- (b) 48
- (c) 64
- (d) 84

Answer: (c) 64

Question 4.

Solve: $7x = 21$

- (a) 3
- (b) 2
- (c) 14
- (d) none of these

Answer: (a) 3

Question 5.

The digits of a two-digit number differ by 3. If the digits are interchanged, and the resulting number is added to the original number, we get 143. What can be the original number?

- (a) 85
- (b) 58
- (c) 36
- (d) 76

Answer: (a) 85

Question 6.

The difference between two whole numbers is 66. The ratio of the two numbers is 2 : 5. What are the two numbers?

- (a) 22 and 88
- (b) 44 and 66
- (c) 44 and 110
- (d) 33 and 99

Answer: (c) 44 and 110

Question 7.

Solve: $5x - 2(2x - 7) = (3x - 1) + \frac{7}{2}$

- (a) 2
- (b) 3
- (c) $\frac{1}{2}$
- (d) $\frac{23}{4}$

Answer: (d) $\frac{23}{4}$

Question 8.

Amina thinks of a number and subtracts $\frac{5}{2}$ from it. She multiplies the result by 8. The result now

obtained is 3 times the same number she thought of. What is the number?

- (a) 2
- (b) 3
- (c) 4
- (d) none of these

Answer: (c) 4

Question 9.

Solve $2x - 3 = x + 2$

- (a) 4
- (b) 5
- (c) 3
- (d) 0

Answer: (b) 5

Question 10.

Find the solution of $2x - 3 = 7$

- (a) 3
- (b) 4
- (c) 5
- (d) none of these

Answer: (c) 5

Question 11.

David cuts a bread into two equal pieces and cuts one half into smaller pieces of equal size. Each of the small pieces is twenty grams in weight. If he has seven pieces of the bread all with him, how heavy is the original cake.

- (a) 120 gm
- (b) 180 gm
- (c) 300 gm
- (d) 240 gm

Answer: (d) 240 gm

Question 12.

What will be the solution of these equations $ax+by = a-b$, $bx-ay = a+b$

- (a) $x = 1, y = 2$

- (b) $x = 2, y = -1$
- (c) $x = -2, y = -2$
- (d) $x = 1, y = -1$

Answer: (d) $x = 1, y = -1$

Question 13.

Solve: $y + 3 = 10$

- (a) 13
- (b) 7
- (c) -7
- (d) none of these

Answer: (b) 7

Question 14.

Aruna cut a cake into two halves and cuts one half into smaller pieces of equal size. Each of the small pieces is twenty grams in weight. If she has seven pieces of the cake in all with her, how heavy was the original cake ?

- (a) 120 gm
- (b) 180 gm
- (c) 300 gm
- (d) 240 gm

Answer: (d) 240 gm

Question 15.

An MNC company employed 25 men to do the official work in 32 days. After 16 days, it employed 5 more men and work was finished one day earlier. If it had not employed additional men, it would have been behind by how many days?

- (a) 1 day
- (b) 2 days
- (c) 3 days
- (d) 2.5 days

Answer: (b) 2 days

Question 16.

Solve $2y + 9 = 4$.

- (a) $\frac{-5}{2}$

- (b) $\frac{1}{2}$
- (c) 2
- (d) none of these

Answer: (a) $\frac{-5}{2}$

Question 17.

In an equation the values of the expressions on the LHS and RHS are _____.

- (a) different
- (b) not equal
- (c) equal
- (d) none of these

Answer: (c) equal

Question 18.

The distance between two mile stones is 230 km and two cars start simultaneously from the milestones in opposite directions and the distance between them after three hours is 20 km. If the speed of one car is less than that of other by 10 km/h, find the speed of each car.

- (a) 25 km/h, 40 km/h
- (b) 40 km/h, 50 km/h
- (c) 20 km/h, 40 km/h
- (d) 30 km/h, 40 km/h

Answer: (d) 30 km/h, 40 km/h

Question 19.

The sum of three consecutive multiples of 7 is 357. Find the smallest multiple.

- (a) 112
- (b) 126
- (c) 119
- (d) 116

Answer: (a) 112

Question 20.

In the following number sequence, how many such even numbers are there which are exactly divisible by its immediate preceding number but not exactly divisible by its immediate following number?

3 8 4 1 5 7 2 8 3 4 8 9 3 9 4 2 1 5 8 2

- (a) One
- (b) Two
- (c) Three
- (d) Four

Answer: (b) Two

Question 21.

The numerator of a fraction is 4 less than the denominator. If the numerator is decreased by 2 and denominator is increased by 1, then the denominator is eight times the numerator. Find the fraction.

- (a) $\frac{4}{12}$
- (b) $\frac{3}{13}$
- (c) $\frac{3}{7}$
- (d) $\frac{11}{7}$

Answer: (c) $\frac{3}{7}$

Question 22.

Mary was counting down from 34 and Thomas was counting upwards simultaneously, the number starting from 1 and he was calling out only the odd numbers. Which common number will they call out at the same time if they were calling out at the same speed?

- (a) 20
- (b) 21
- (c) 22
- (d) 23

Answer: (d) 23
