

LINEAR EQUATIONS IN ONE VARIABLE

11

Q1. If the length and breadth of a rectangle are 'L' and 'B' respectively, match the statements with the correct equation:

Length is 4 units more than its breadth	$L = 2B$
Length is 4 times its breadth	$A = L \times B$
Length is twice its breadth	$L = B + 4$
Area 'A' of a rectangle is the product of its length and breadth	$L = 4B$

Q2. Write an equation for the following:

a. 2 subtracted from a number is 11:

b. 10 subtracted from four times a number is 6:

c. The sum of a number and its successor is 7:

Q3. If

$$2x + 3 = 3x - 5$$

From the following cases tick the ones in which the equation remains unchanged:

a. $2x + 3 + 2 = 3x - 5 + 2$

b. $(2x + 3) \times 2 = (3x - 5) \times 2$

c. $2x + 3 - 4 = 3x - 5 - 4$

d. $(2x + 3) \div 4 = (3x - 5) \div 4$

Q4. Find the solution of the following equations. Also, verify your answers.

$$2x - 6(x - 7) = 40$$

Answer:

x = _____

Verification:

Q5. Tick the number which is the solution of the given equation:

Equation	Solution of the equation
$3x - 4 = 11$	a. $x = 5$; b. $x = \frac{7}{3}$ c. $x = \frac{3}{7}$
$2y - 3 = 3y - 15$	a. $y = \frac{18}{5}$ b. $y = -12$ c. $y = 12$

Q6. The sum of two consecutive even numbers is 26. Find the two numbers.

Answer: _____

Q7. Verify if the given value of x is a solution for each of the following equations. State true or false against each of the following statements:

- a. If $7x + 2 = 9$; $x = 1$. _____
- b. If $x + 7 = 5x - 21$; $x = 7$ _____
- c. If $9(x+1)=99$; $x = 11$ _____

Q8. Perimeter of a square is 256 square units. Find the length of each side of the square.

Answer: _____

Q9. There are red, blue and green coloured balls in a bag. If half of the balls are red, one third are green and the rest 120 are blue, find the total number of balls in the bag.

Answer: _____

Q10. Reshma bought 5 bats and 6 balls for Rs. 710. The cost of a bat was Rs.10 more than the cost of a ball. Adi wants to buy one bat and one ball. How much money should he pay for the two items?

Answer: _____

ANSWERS

1.	Length is 4 units more than its breadth	$L = B + 4$
	Length is 4 times its breadth	$L = 4B$
	Length is twice its breadth	$L = 2B$
	Area 'A' of a rectangle is the product of its length and breadth	$A = L \times B$

2. a. $x - 2 = 11$
b. $4x - 10 = 6$
c. $x + x + 1 = 7$ or $2x + 1 = 7$

3. (a) and (c)

4. $x = \frac{1}{2}$

5.	Equation	Solution of the equation
	$3x - 4 = 11$	$x = 5$
	$2y - 3 = 3y - 15$	$y = 12$

6. 12, 14
7. a. True, b. True, c. False
8. 64 units
9. 720 balls
10. Rs. 130