Q.1 Fill in the blanks:

(a) An equation is a condition on a ................
(b) A ........... takes on different numerical values.
(c) The value of the expression (10y-20) depends on the value of ...........
(d) An equation is a statement of ............
(e) A linear equation in one variable involves a variable whose power is ..........  

Q.2 Write equations for the following statements:

(a) Three times a number x added to 70 gives 100.
(b) Total cost of 2 tables and 3 chairs is Rs.2300.
(c) Thrice of sum of a number y and 7 is 15.
(d) 7 subtracted from four times a number x gives 21.
(e) 7 taken away from twice the number is equal to 9 more than the number.

Q.3 Write the following equations in the statement form:

(a) $x - 2 = 9$  (b) $4m = 20$  (c) $2x + 1 = 11$  (d) $4 - 5y = 2$  (e) $\frac{1}{4}x - 2 = 10$

Q.4 Check whether the value given in the brackets is a solution to the given equation or not.

(a) $4x - 7 = 13$  (x = 5)  (b) $\frac{x}{5} + 3 = 1$  (x = 10)
(c) $3(y + 7) = 15$  (y = -2)

Q.5 Solve and verify:

(a) $\frac{5z + 1}{3} = 7$  (b) $2x + 16 = 4 - x$  (c) $5p + 7 = 21 - 2p$
Q.6 Solve :

(a) \(2(x - 1) = x + 2\)  
(b) \(\frac{2x + 5}{2} = \frac{2}{3} - x\)  
(c) \(5x - 6 = 12 - x\)  
(d) \(4m = 7 = 3m + 10\)  
(e) \(4(2x - 1) = 5(x + 3) + 3\)

Q.7 The sum of number and 12 is 33. Find the number.

Q.8 A number is multiplied by 3 and 7 is taken away from the product. The final result is 11. Find the number.

Q.9 The sum of two consecutive numbers is 13. Find the numbers.

Q.10 Max is 6 years older than two times Lara's age. If the age of Max is 36 years, find Lara's age.

Q.11 A horse and a cart together cost Rs.1600. If the cost of the cart is one-third the cost of the horse, find the cost of the cart and the horse.

Q.12 The breadth of a rectangle is 7 more than its length. Find the dimensions of the rectangle, if the perimeter of the rectangle is 30cm.

Q.13 The difference between two-third and three-fifth of a number is 10. Find the number.

Q.14 On his 13th birthday, a boy decided to distribute blankets to the poor people instead of giving party to his friends. Half of the blankets he distributed in an old age home, three-fourth of the remaining in an orphanage and rest 20 were distributed to the road side beggars. Find the number of blankets he had. What values are being promoted?

Q.15 In a class of 35 students, the number of girls is two-fifth of the number of boys. Find the number of girls in the class.