

1. The length of a rectangle is 'L' cm. Its width is 3 cm less than its length. What is the expression for its width?
2. When is the statement " $x + y = x - y$ " true?
3. A factory produces 'f' toys per day. How many toys will it produce in a week (7 days)?
4. A bag contains 'r' red marbles and 'b' blue marbles. If 5 red marbles are added to the bag, what is the new total number of marbles?
5. Solve for 'x':  $x / 5 - 1 = 4$
6. Identify the equation from the following options:
7. If 'a' is a number, which expression means "half of the number 'a' increased by 10"?
8. If  $x = 10$ , what is the value of  $3x - 5$ ?
9. Which operation is the inverse of "adding 8" when solving an equation?
10. A pattern starts with 5, then 10, then 15. What is the expression for the nth term of this pattern?
11. Solve for 'p':  $p - 12 = 8$
12. Which of the following is true for any variable 'a'?
13. The cost of one apple is 'a' rupees and the cost of one banana is 'b' rupees. What is the total cost of 5 apples and 3 bananas?
14. If a number 'N' is decreased by 10 and the result is 20, what is the number?
15. The temperature in a city is 'T' degrees Celsius. If it rises by 7 degrees, what is the new temperature?
16. What is the value of  $15 - 2y$  if  $y = 6$ ?
17. What is the value of y in the equation  $3y + 2 = 17$ ?
18. What is the value of  $(a + b) * c$  if  $a = 2$ ,  $b = 3$ , and  $c = 4$ ?
19. If the perimeter of an equilateral triangle is 'P' and its side length is 's', which equation correctly relates P and s?
20. If a number 'k' is multiplied by 4 and then 9 is subtracted from the result, the answer is 11. Which equation represents this situation?