

Name: \_\_\_\_\_

Due Date: \_\_\_\_\_

Teacher: \_\_\_\_\_

Parent Sign: \_\_\_\_\_

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Questions

1. Which symbol usually represents a variable in an expression:  $x$ ,  $+$ ,  $7$ , or  $=$  ?
2. In the expression  $5n + 3$ , identify the variable and the constants.
3. Is  $4 + p$  an equation or an expression?
4. Write an expression for "seven more than a number  $n$ ."
5. Evaluate  $4m$  when  $m = 6$ .
6. Evaluate  $3(x + 2)$  when  $x = 4$ .
7. Simplify the expression  $6 + 2 + t$  (combine like terms).
8. Which of the following is an equation:  $9y - 5$ ,  $7 + 3$ ,  $2x = 8$ , or  $x + 4$ ?
9. True or false: In the equation  $2a + 3 = 11$ ,  $a$  is a variable.
10. Test whether  $x = 3$  is a solution to  $2x + 5 = 11$ . (Show true/false)
11. Test whether  $y = 4$  is a solution to  $3y - 2 = 10$ .
12. Test whether  $x = 2$  is a solution to  $x/2 + 6 = 7$ .
13. Solve for  $x$ :  $x + 8 = 15$ .
14. Solve for  $n$ :  $n - 5 = 9$ .
15. Solve for  $p$ :  $6p = 24$ .
16. Solve for  $m$ :  $m/4 = 5$ .
17. Write an equation for: "A number  $n$  increased by 12 equals 30."
18. A cake recipe needs  $3x$  cups of flour for  $x$  cakes. If you want 4 cakes, how many cups of flour (evaluate  $3x$ )?
19. Write an expression for "twice a number  $y$  decreased by 4."
20. Evaluate the expression  $2a - 3$  when  $a = 5$ .
21. Test whether  $t = -1$  is a solution to  $5t + 10 = 5$ . (True/False)
22. Solve:  $7 + x = 13$ .
23. Solve:  $10 - k = 2$ .
24. Solve:  $9q = 45$ .
25. Solve:  $r/3 = 7$ .
26. Write an equation and solve: "Seven more than a number is 20." (Let the number be  $n$ .)
27. Josh had  $x$  marbles. He gave 8 away and now has 12. Write an equation and find  $x$ .
28. A rectangle's length is  $l$  and its width is 5. If the perimeter is 34, write an equation and find  $l$ . (Perimeter =  $2(\text{length} + \text{width})$ )
29. Test whether  $x = 5$  is a solution to  $4x - 7 = 13$ .
30. Evaluate  $3(2 + k)$  when  $k = 1$ .



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## Math Worksheet for 6th Grade

### Algebraic equations basics

31. Which is the expression:  $4 + y = 10$  or  $4 + y$ ?
32. Identify the constant term in the expression  $8x + 6$ .
33. If  $2b + 4 = 16$ , what is  $b$ ? (Solve)
34. Test whether  $x = 6$  is a solution to  $x - 3 = 2$ .
35. Write an expression for "the product of 9 and a number  $m$ ."
36. Evaluate  $5z$  when  $z = 0$ .
37. Solve:  $x + 0 = 9$ .
38. Write an equation and solve: "Three times a number minus 2 equals 16." (Let number be  $n$ .)
39. A store sells pencils in packs of 6. If  $p$  packs cost 30 dollars, write an equation for price per pack and find the price per pack.
40. Test whether  $n = 2$  is a solution to  $4(n + 1) = 12$ .
41. If  $12 = 3x + 3$ , what is  $x$ ?
42. Simplify the expression  $5 + 3 + x + 2$  (combine like terms).
43. Write an equation for "Half of a number  $y$  is 9" and solve for  $y$ .
44. Sarah says the expression  $2 + 3x$  has value 11 when  $x = 3$ . Is she correct? (True/False)
45. Test whether  $a = 4$  is a solution to  $2(a + 1) = 10$ .
46. Solve:  $15 - t = 6$ .
47. Write an expression for "the sum of a number  $x$  and 14."
48. Evaluate the expression  $4(x - 2)$  when  $x = 7$ .
49. Describe whether 7 is a variable, constant, expression, or equation: "7."
50. A number times 4 equals 28. Write an equation and solve for the number.