



## Math Worksheet for 6th Grade

### Evaluating expressions word problems

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

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

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

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

1. Evaluate  $T + 5$  for  $T = 12$ .
2. Evaluate  $2T - 3$  for  $T = -4$ .
3. The morning temperature is  $T$  degrees. In the afternoon it rises by 9 degrees. Evaluate  $T + 9$  for  $T = -6$ .
4. Evaluate  $3T$  for  $T = 7$ .
5. The temperature drops by 4 degrees overnight. If the daytime temperature is  $T$ , the next morning is  $T - 4$ . Evaluate for  $T = 0$ .
6. Evaluate  $D - N$  for  $D = 15$  and  $N = 8$  (daytime minus nighttime).
7. A forecast says the temperature will double. Evaluate  $2T$  for  $T = 7$ .
8. The temperature increases 3 degrees each hour for 4 hours. Write and evaluate  $T + 3 \cdot 4$  for  $T = 5$ .
9. Convert Celsius to Fahrenheit using  $F = (\frac{9}{5})C + 32$ . Evaluate for  $C = 10$ .
10. The temperature is  $T$ . Overnight it falls by 6 degrees, then rises by 2 degrees the next day. Evaluate  $T - 6 + 2$  for  $T = 8$ .
11. Evaluate  $T \div 2$  for  $T = 14$ .
12. The high temperature is  $H$  and the low is  $L$ . The average is  $(H + L)/2$ . Evaluate for  $H = 20$ ,  $L = 8$ .
13. Evaluate  $-T$  for  $T = 13$ .
14. The temperature drops by 3 degrees each hour. After 5 hours the change is  $5 \cdot (-3)$ . Evaluate  $T + 5 \cdot (-3)$  for  $T = 25$ .
15. Evaluate  $4T - 10$  for  $T = 9$ .
16. If  $T = -2$ , evaluate  $5 - T$ .
17. The reading on Friday is  $T$  degrees. On Saturday it is 2 degrees lower and Sunday is 5 degrees higher than Saturday:  $(T - 2) + 5$ . Evaluate for  $T = 10$ .

#### Cubes (18-33)

18. Evaluate  $c^3$  for  $c = 2$ .
19. Evaluate  $2c^3 + 1$  for  $c = 3$ .
20. The volume  $V$  of a cube with side  $s$  is  $V = s^3$ . Evaluate for  $s = 4$ .
21. How many unit cubes are in a  $5 \times 5 \times 5$  cube? (Evaluate  $n^3$  for  $n = 5$ .)
22. Evaluate  $(c + 1)^3$  for  $c = 1$ .
23. Evaluate  $c^3 - c$  for  $c = 3$ .
24. Evaluate  $-c^3$  for  $c = 2$ .
25. Evaluate  $(2c)^3$  for  $c = 2$ .
26. Evaluate  $c^3 + 2c$  for  $c = -2$ .
27. Evaluate  $5 - c^3$  for  $c = 1$ .
28. Evaluate  $c^3 \div c$  for  $c = 3$  (assume  $c \neq 0$ ).
29. Evaluate  $4c^3 - 2$  for  $c = 2$ .



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30. Evaluate  $c^3$  for  $c = 0$ .

31. A cube has side length  $c = 6$ . How many  $1 \times 1 \times 1$  unit cubes are inside? (Evaluate  $c^3$ .)

32. Evaluate  $(c - 1)^3$  for  $c = 4$ .

33. Evaluate  $3c^3 + c$  for  $c = 1$ .

Exponents (34-50)

34. Evaluate  $x^2$  for  $x = 5$ .

35. Evaluate  $3x^2 + 2$  for  $x = 4$ .

36. Evaluate  $2^4 + x$  for  $x = 3$ .

37. The area  $A$  of a square is  $A = s^2$ . Evaluate for  $s = 6$ .

38. Evaluate  $(2x)^2$  for  $x = 3$ .

39. Evaluate  $5^2 - y$  for  $y = 7$ .

40. Evaluate  $2^n$  for  $n = 5$ .

41. Evaluate  $n^0$  for  $n = 5$ .

42. Evaluate  $0^2$ .

43. Evaluate  $x^2$  for  $x = -2$ .

44. Evaluate  $-x^2$  for  $x = 2$ .

45. Evaluate  $(-x)^2$  for  $x = 2$ .

46. Evaluate  $4^3$ .

47. Evaluate  $3^2 + 2^3$ .

48. A square garden has side length  $(n + 1)$ . Evaluate  $(n + 1)^2$  for  $n = 3$ .

49. Evaluate  $2^3 \cdot x$  for  $x = 5$ .

50. Evaluate  $3x^2 - 2x + 1$  for  $x = 2$ .