

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

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

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

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

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Questions

1. Write  $4 \times 4 \times 4$  as an exponential expression.
2. Evaluate  $2^5$ .
3. Evaluate  $3^4$ .
4. Evaluate  $5^2$ .
5. What is  $7^{17}$ ?
6. What is  $6^{07}$ ?
7. In  $10^3$ , name the base and the exponent.
8. Write  $9^2$  as repeated multiplication.
9. Which is larger:  $2^6$  or  $6^{27}$ ? Show both values.
10. Evaluate  $1^5$ .
11. Express  $12 \times 12$  as a power (exponent form).
12. Find the value of  $4^3$ .
13. If  $a = 2^3$  and  $b = 2^4$ , which is greater and why?
14. Evaluate  $3^2 \times 3^1$  by converting to numbers.
15. Write  $8 \times 8 \times 8 \times 8$  as an exponent.
16. Evaluate  $10^2$ .
17. Find the missing exponent:  $5^? = 125$ .
18. Evaluate  $2^3 \times 2^2$  by multiplying the values.
19. Express 16 as a power of 2.
20. Evaluate  $3^0$ .
21. A square has side length 5 units. What is its area using exponents?
22. A cube has side length 3 cm. What is its volume using exponents?
23. Write one thousand as a power of 10.
24. The sequence is 2, 4, 8, 16, ... What is the 5th term?
25. A bacteria doubles every hour. Starting with 1 bacterium, how many after 4 hours?
26. Write 100 as a power of 10.
27. Evaluate  $7^2$ .
28. Express 81 as a power of 3.
29. If  $4^x = 64$ , find x.
30. Write 27 as a power of 3.
31. Evaluate  $2^7$ .



# Math Worksheet for 6th Grade

## Meaning of exponents

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32. The number 125 equals which power of 5?
33. Evaluate  $2^3 \times 2^2$  by first finding each power and then multiplying.
34. How many  $1 \times 1$  squares are on a  $4 \times 4$  chessboard? (Use exponents if helpful.)
35. Write  $1 \times 1 \times 1 \times 1$  as a power.
36. Which is greater:  $5^3$  or  $3^{5^?}$  Give both values.
37. Evaluate  $9^1$ .
38. If  $n^2 = 49$ , find the positive value of n.
39. A pattern triples each step: 1, 3, 9, 27, ... What is the 5th term?
40. Convert  $6 \times 6 \times 6 \times 6 \times 6$  to exponent form.
41. Evaluate  $11^2$ .
42. Express 32 as a power of 2.
43. If  $a = 10^2$  and  $b = 10^3$ , which is larger?
44. Write  $14 \times 14$  as an exponent.
45. A farmer plants seeds in 7 rows with 7 seeds each. How many seeds is that? Express as a power.
46. What is  $2^{4^?}$
47. Evaluate  $4^2 + 4^1$ .
48. If  $x^3 = 8$ , find x.
49. Which exponential expression equals  $2 \times 2 \times 2 \times 2$ ?
50. Express 144 as a power of 12.