

EXPONENTS

ANSWERS

EXAMPLE 1



THIS IS AN EXPONENT. IT'S A WAY OF SHOWING MULTIPLICATION IN A SHORTER VERSION.

$$4^2 \leftarrow \text{exponent}$$
$$\uparrow$$

base

$$4^2 = 4 \times 4 = \underline{16}$$

I GET IT. THE 4 IS THE NUMBER WE'RE MULTIPLYING AND THE 2 TELLS US HOW MANY 4'S WE HAVE.



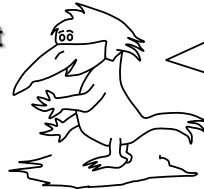
THIS IS FOUR TO THE SECOND POWER OR FOUR SQUARED.

EXAMPLE 2

$$3^4 \leftarrow \text{exponent}$$
$$\uparrow$$

base

$$3^4 = 3 \times 3 \times 3 \times 3 = 9 \times 9 = \underline{81}$$



SO THIS WILL BE 3 TO THE FOURTH POWER, WHICH IS $3 \times 3 \times 3 \times 3$, AND IF I MULTIPLY THE 3'S I'LL GET 81.

MORE EXAMPLES

$$2^5 = 2 \times 2 \times 2 \times 2 \times 2 = 32$$
$$6^0 = 1$$

Now your turn.

1. $7^3 = \underline{343}$
 $7 \times 7 \times 7 = 49 \times 7 = \underline{343}$
THIS IS CALLED SEVEN TO THE THIRD POWER OR SEVEN CUBED.

2. $4^1 = \underline{4}$

3. $9^2 = \underline{81}$

4. $12^0 = \underline{1}$

5. $2^4 = \underline{16}$

6. $3^3 = \underline{27}$

7. $5^2 = \underline{25}$

8. $13^2 = \underline{169}$

9. $1^5 = \underline{1}$

10. $8^1 = \underline{8}$

11. $6^3 = \underline{216}$

12. $2^6 = \underline{64}$

13. $3^5 = \underline{243}$

14. $10^4 = \underline{1,000}$

15. $4^3 = \underline{64}$

16. $11^3 = \underline{1,331}$

17. $9^0 = \underline{1}$

18. $7^4 = \underline{2,401}$