

Lesson 6-3 • Group 2

Reinforce Understanding

6.3 Small Group • Group 2

I can write and evaluate numbers in exponent form using a base and a power, explain what each part stands for, and build one for a situation I have not seen before.

Worked model

Write $9 \times 9 \times 9 \times 9$ as a power. Then name its base and its exponent.

1. Find the repeated factor. The factor is 9.
2. Count how many times it is used. It is used 4 times.
3. Write the base, then the exponent. 9^4
4. Read it out loud. 9 to the 4th power

Answer: $9 \times 9 \times 9 \times 9 = 9^4$. The base is 9 and the exponent is 4.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Evaluate each exponential expression. Show the repeated multiplication and the final value.

Complete the table. Show how you found each value.

Power	Repeated Multiplication	Value
4^3	$4 \times 4 \times 4$	
2^6	$2 \times 2 \times 2 \times 2 \times 2 \times 2$	
5^3	$5 \times 5 \times 5$	
10^4	$10 \times 10 \times 10 \times 10$	

Show your work

2. Sort each power by whether its value is greater than 50 or not.

Write the name of the correct group on each line.

Groups: Value > 50 Value $\leq$ 50

- _____ 2^5
- _____ 3^4
- _____ 7^2
- _____ 10^2
- _____ 5^3
- _____ 4^2