

Name _____



Reasoning Powers

Directions: Simplify each expression. Then write one or two sentences explaining why the exponent law works. Use repeated multiplication or mathematical reasoning in your explanation.

1. $5^2 \times 5^4 \rightarrow$ _____

Why it works:

5. $(20 \div 5)^3 \rightarrow$ _____

Why it works:

2. $8^7 \div 8^3 \rightarrow$ _____

Why it works:

6. $12^0 \rightarrow$ _____

Why it works:

3. $(4^3)^2 \rightarrow$ _____

Why it works:

7. $7^{-2} \rightarrow$ _____

Why it works:

4. $(3 \times 9)^2 \rightarrow$ _____

Why it works:

8. $2^3 \times 2^2 \times 2^1 \rightarrow$ _____

Why it works: