

Warm-Up

October 4, 2016

1. What are the two parts of a power?

5⁵ ← exponent
5 ← base

2. Write 5^6 as a repeated multiplication and evaluate.

#2

Standard form

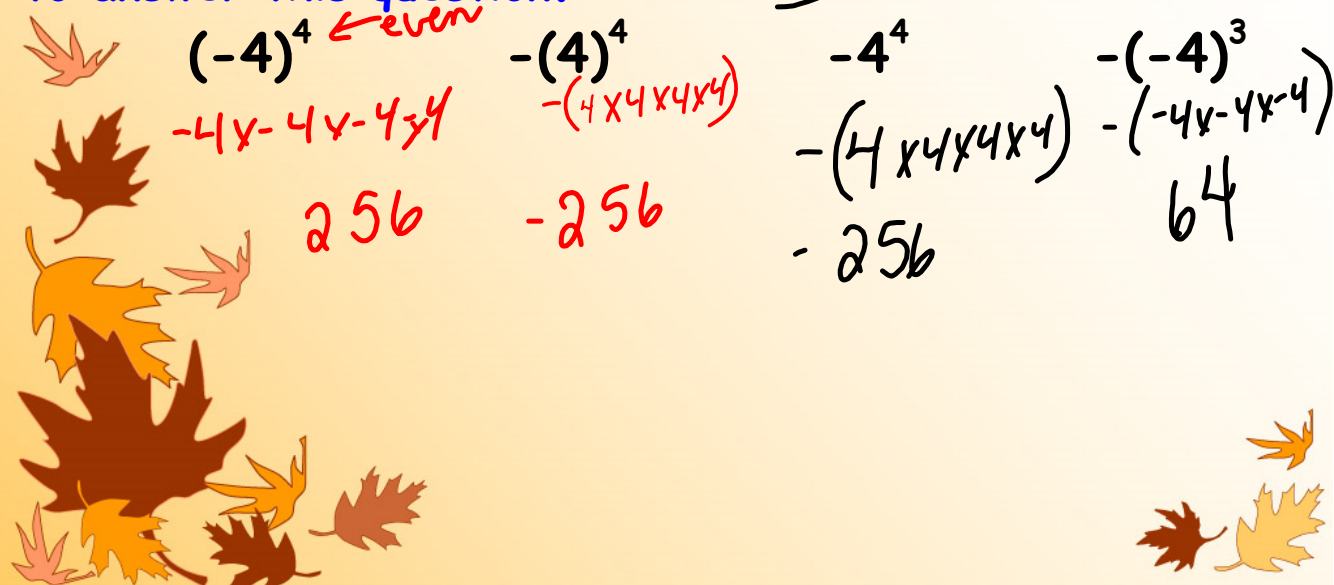
Power	Base	Exponent	Repeated Multiplication	Evaluate
5^4	5	4	$5 \times 5 \times 5 \times 5$	625
6^3	6	3	$6 \times 6 \times 6$	216

$(-4)^6$ -4 6 $-4 \times -4 \times -4 \times -4 \times -4 \times -4$ 4096
 $(-3)^5$ -3 5 $-3 \times -3 \times -3 \times -3 \times -3$ -243

3. Explain why 3^4 and 4^3 are not the same.

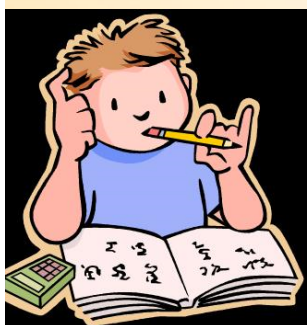
$$\begin{array}{l}
 3 \times 3 \times 3 \times 3 = 81 \\
 4 \times 4 \times 4 = 64
 \end{array}
 \left. \vphantom{\begin{array}{l} 3 \times 3 \times 3 \times 3 \\ 4 \times 4 \times 4 \end{array}} \right\} \begin{array}{l} \text{The answer} \\ \text{in standard} \\ \text{form is} \\ \text{different} \end{array}$$

4. Do brackets matter? Evaluate each of the following to answer this question.



$$\begin{array}{ccccccc}
 (-4)^4 & \leftarrow \text{even} & -(4)^4 & \longleftrightarrow & -4^4 & & -(-4)^3 \\
 -4 \times -4 \times -4 \times -4 & & -(4 \times 4 \times 4 \times 4) & & -(4 \times 4 \times 4 \times 4) & & -(-4 \times -4 \times -4) \\
 256 & & -256 & & -256 & & 64
 \end{array}$$

Homework questions



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7, 8, 9, 12, 13, 14, 16, 20, 21

Worksheet

