

Activity 4 Assessment

Exploring Whole-Number Exponents

Content: Writing and Evaluating Powers

Identifies the exponent and base in a given power

"I know the power 2^5 has base 2 and exponent 5.
I know the power 5 squared or 5^2 has base 5 and exponent 2."

Represents powers in expanded form and standard form

"I can represent powers in expanded form and standard form."

$$\begin{aligned} 3^4 &= 3 \times 3 \times 3 \times 3 \\ &= 81 \\ 4^3 &= 4 \times 4 \times 4 \\ &= 64 \end{aligned}$$

Explains the role of parentheses in powers

"The exponent applies only to the base of the power and the brackets help identify the base."

$$\begin{aligned} 2^4 &= 16 \\ -2^4 &= -16 \\ (-2^4) &= -16 \\ (-2)^4 &= 16 \\ -(-2^4) &= 16 \end{aligned}$$

Solves problems involving powers

"Since the patch in the pond doubles every day and it is covered on day 48, then the day before it would be half covered."

Observations/Documentation

Activity 4 Assessment

Exploring Whole-Number Exponents

Competency: Problem Solving in a Group Situation			
Engages in problem solving experiences in a group “We can work as a group to approach and explore a problem. I can listen to the ideas of others and share my own ideas.”	Uses tools and representations to explore a problem “We can use a table to organize our data. We can use a calculator and repeated multiplication to explore the problem further.”	Develops, demonstrates, and applies mathematical understanding “We recognize this as a problem that applies our understanding of powers.”	Perseveres in the problem-solving process to deepen understanding and connections “That was challenging, but as a group, we were able to keep trying and learning.”
Observations/Documentation			