

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."

$$3^4 = 3 \times 3 \times 3 \times 3 \\ = 81$$

$$4^3 = 4 \times 4 \times 4 \\ = 64$$

Explains the role of parentheses in powers

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

$$2^4 = 16 \\ -2^4 = -16 \\ (-2^4) = -16 \\ (-2)^4 = 16 \\ -(-2^4) = 16$$

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

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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

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