Activity 5 Assessment
Exploring Exponent Laws

Content: Operations on Powers with Integral Bases			
Lists the exponent laws of powers and quotients	Understands and explains why the different exponent laws work	Evaluates a given expression by applying the exponent laws	Identifies errors in a given simplification of an expression involving powers
"When I multiply powers with the same base, I can add the exponents. When I divide powers with the same base, I can subtract the exponents."	$3^4 \times 3^2$ $= (3 \times 3 \times 3 \times 3)(3 \times 3) = 3^6$ "I can represent powers in expanded form to help me explain why I can add the exponents when I multiply powers with the same base."	$(7^2)^3 \div (7^4)$ "$(7^2)^3 \div (7^4)$ $= (7^{2 \times 3}) \div (7^4)$ $= (7^6) \div (7^4)$ $= 7^{6-4}$ $= 7^2$, or 49"	Is this simplification correct? $$\frac{(9^6)(9^5)}{(9^2)^3(9^4)} = 9^2$$ "No, I think the exponents in the denominator were all added together to get 9^9. The answer should be 9^1 because the denominator should be $(9^{2 \times 3})(9^4)$ $= 9^{6+4}$ $= 9^{10}$."

Observations/Documentation			

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Competency: Understanding			
Engages in learning tasks in a group "I can work with others to approach and explore a learning task. I can listen to the ideas of others and share my own ideas."	Makes connections to their own learning and pushes for deeper understanding "I try to make connections between what I am learning and what I already know."	Advocates for their own learning and asks questions to make sure they understand the concepts "I can stop the group and ask questions or ask the teacher for clarification when the group needs a hint or extension."	Pushes their learning further to extend their thinking and problem-solving skills "I can ask for a challenge when I am ready for one."
Observations/Documentation			

Mathology 9 PEI
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