Standard 8.EE.1 **7.4 Power Property of Exponents**  Unit 5

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| **Raising a Power to a Power** |
| To raise a power to a power, multiply the exponents. |   | Examples: |

**Why it Works:** Use repeated multiplication to rewrite the product of powers: (52)4 = ?

1. Expand into the product numbers LEAVING 52 as 52.

 (52)4 = ( ) x ( ) x ( ) x ( )

 ( x ) x ( x ) x ( x ) x ( x ) =

**Simplifying a Power Raised to a Power**

What is each expression written using each base only once?

1. 
2. 
3. 
4. 
5. Is true for all integers m and n? Explain.

**Simplifying an Expression with Powers**

What is the simplified form of each expression?

1. 
2. 
3. 
4. 

|  |
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| **Raising a Product to a Power** |
| To raise a product to a power, raise each factor to the power and multiply. |   | Examples: |

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**Simplifying a Product Raised to a Power**

Find the expression that represents the area of the square.

What is the simplified form of each expression?

1. 
2. 
3. 

**Simplifying an Expression with Products**

What is the simplified form of ?

What is the simplified form of each expression?

1. 
2. 
3. 