**Warm-Up**

Factoring & Solving Quadratic Equations

1. Solve the equation below.
2. What is one value of x that makes the quadratic equation below true?
3. Ifandare constants and what is the value of?
4. 5
5. 6
6. 7
7. It cannot be determined from the information given.

**Lesson 7-1A: Properties of Exponents**

|  |  |
| --- | --- |
| Content Objective | Students will be able to simplify monomial expressions using the properties of exponents. |
| Language Objective | Students will justify their reasoning by writing the exponent properties used to simplify each expression. |
| Mathematical Practice | *Repeated Reasoning* |

|  |  |  |
| --- | --- | --- |
| **Rule** | **Example #1** | **Example #2** |
| *Zero Power* |  |  |
| *Negative Exponent* |  |  |
| *Power to a Power* |  |  |
| *Product to a Power* |  |  |
| *Quotient to a Power* |  |  |
| *Product Property* |  |  |
| *Quotient Property* |  |  |

**Simplifying More Complex Expressions**

**Useful Strategies:**

**Visual Learners** An exponent of 1 is typically omitted. When simplifying expressions with lots of exponents is important to remember this fact. Write an exponent of 1 for any variable or expression where you do not see an exponent.

You can use the Order of Operations, or PEMDAS, as a guide for simplifying expressions.

For expressions with multiple variables, separating like terms into groups may be helpful.

**Simplify and rewrite each expression using only positive exponents. Justify your reasoning by identifying the exponent properties used to simplify each expression.**

|  |  |  |
| --- | --- | --- |
|  |  |  |

**L7-1A Homework**

Exponent Properties

|  |  |
| --- | --- |
|  |  |
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|  |  |
|  |  |

**Warm-Up**

Exponent Properties

1. Which of the following is equivalent to the expression below?

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

1. Which of the following is equivalent to the expression below?

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

1. Which of the following is equivalent to the expression below?

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

**Quick Discuss Critique**

Mario and Quan are simplifying the same expression

Is either of them correct? *Explain your reasoning****.***

Mario

Quan

**Homework 7-1A**

Negative Exponents

***Directions***: Simplify each expression.

1. .