

BIG IDEAS

Proportional comparisons can be made among triangles and angles on a coordinate plane, using trigonometry.

The meaning of each **operation**, including rational exponents and radicals, extends to algebraic expressions.

Functions allow us to model contextualized situations, including financial ones.

Operations between algebraic expressions equations are **connected** and allow us to make meaning through abstract thinking.

Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to be able to do the following:</i></p> <p>Reasoning and analyzing</p> <ul style="list-style-type: none"> Use reasoning and logic to analyze and apply mathematical ideas Estimate reasonably Demonstrate fluent and flexible thinking of number Use tools or technology to analyze relationships and test conjectures Model mathematics in contextualized experiences <p>Understanding and solving</p> <ul style="list-style-type: none"> Develop, demonstrate, and apply conceptual understanding of mathematical ideas Visualize to explore and illustrate mathematical concepts and relationships Apply flexible strategies to solve problems in both abstract and contextualized situations Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures <p>Communicating and representing</p> <ul style="list-style-type: none"> Communicate mathematical thinking in many ways Use mathematical vocabulary and language to contribute to mathematical discussions Represent mathematical ideas in a variety of ways Explain and justify mathematical ideas 	<p><i>Students are expected to know the following:</i></p> <ul style="list-style-type: none"> operations on powers with rational exponents and radicals real number system exponential functions financial literacy: investments and loans polynomial factoring of the form: $ax^2 + bx + c$, $a^2x^2 - b^2y^2$ rational expressions and equations quadratic functions and quadratic equations trigonometry, including non-right triangles and angles in standard position

Learning Standards (continued)

Curricular Competencies	Content
<p>Connecting and reflecting</p> <ul style="list-style-type: none"> • Reflect on mathematical thinking • Use mathematics to support personal choices • Connect mathematical concepts to each other and to other areas and personal interests • Incorporate First Peoples worldviews and perspectives to make connections to mathematical concepts 	

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