ALGEBRA I

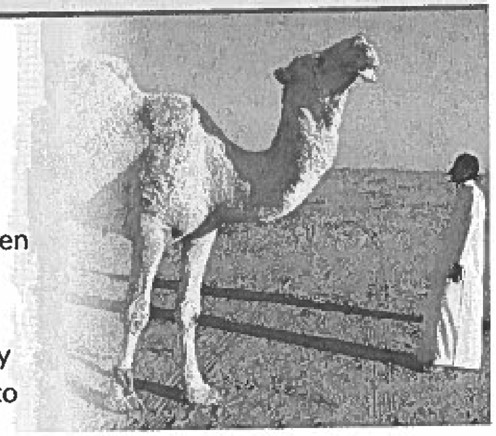
MODULE 5

Maximizing and Minimizing

Family Guide

MODULE 5 Maximizing and Minimizing

Algebra I



TOPIC 1 Introduction to Quadratic Functions

In *Introduction to Quadratic Functions*, students begin by exploring four situations that can be represented with quadratic functions. Students then represent each situation with an equation, a graph, and a table of values and explore the characteristics of the functions represented by each situation and different forms of a quadratic function. They use what they have learned about function transformations and apply this knowledge to transforming quadratic functions.

Where have we been?

In *Linear Functions*, students learned that linear functions are polynomials of degree 1. They have written linear functions in general form as $f(x) = ax + b$ and in factored form as $y = a(x - c)$. Students have learned that the zeros of a function are the places where the function crosses the x-axis, and they can identify zeros on a graph. *Introduction to Quadratic Functions* is a direct extension of these concepts; students learn that quadratic functions are polynomials of degree 2 and have characteristics similar to linear functions.

Where are we going?

In this topic, students will solidify their knowledge of function transformations. Understanding how to sketch a quadratic function is the underpinning for sketching more complicated polynomials in higher levels of mathematics.

TALKING POINTS

DISCUSS WITH YOUR STUDENT

Recognizing functions from a table of values is an important topic to know about for college admissions tests.

HERE IS A SAMPLE QUESTION

What type of function models this table of values?

x	f(x)
0	1
1	−2
2	−1
3	4
4	13

Because the x-values are consecutive, analyze consecutive $f(x)$-values. First differences are (−3), 1, 5, and 9. *Second differences*, the differences between first differences, are 4, 4, and 4. Because second differences are equal, the function is quadratic.

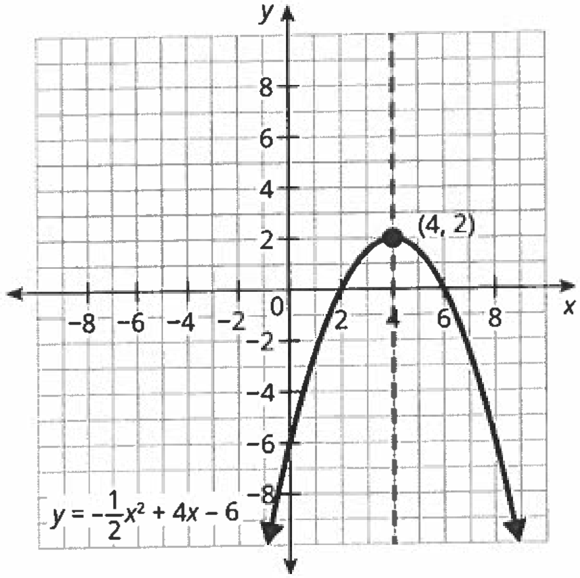
NEW KEY TERMS

- parabola [parábola]
- vertical motion model [modelo de movimiento vertical]
- roots [raíces]
- second differences [segundas diferencias]
- standard form of a quadratic function [forma estándar de una función cuadrática]
- factored form [forma factorizada]
- concave down
- concave up
- vertex [vértice]
- axis of symmetry [eje de simetría]
- argument of a function [argumento de una función]
- reflection [reflexión]
- line of reflection [línea de reflexión]
- vertex form [forma de vértice]

Refer to the Math Glossary for definitions of the New Key Terms.

Where are we now?

The shape that a quadratic function forms when graphed is called a *parabola*. A **parabola** is a smooth curve with reflectional symmetry.



Second differences are the differences between consecutive values of the first differences.

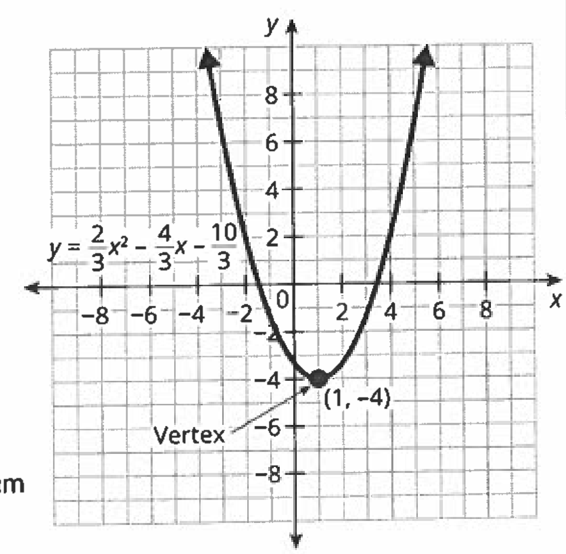
x	y
−3	−5
−2	0
−1	3
0	4
1	3
2	0
3	−5

First Differences
0 − (−5) = 5
3 − 0 = 3
4 − 3 = 1
3 − 4 = −1
0 − 3 = −3
−5 − 0 = −5

Second Differences
3 − 5 = −2
1 − 3 = −2
−1 − 1 = −2
−3 − (−1) = −2
−5 − (−3) = −2

The **vertex of a parabola** is the lowest or highest point on the graph of the quadratic function.

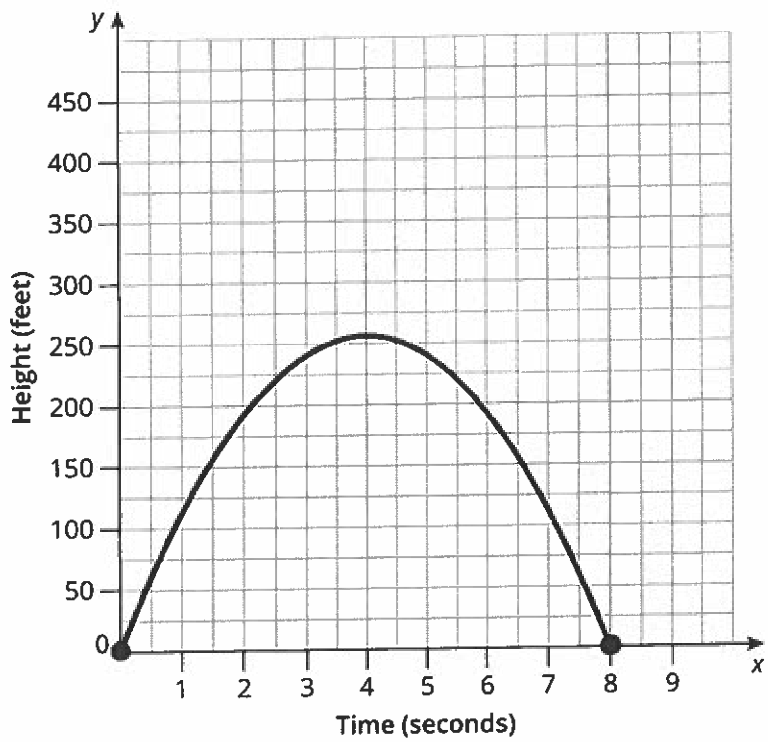
The vertex of the graph of $y = \frac{2}{3}x^2 - \frac{4}{3}x - \frac{10}{3}$ is the point (1, −4), the absolute minimum of the parabola.



In **Lesson 1: Exploring Quadratic Functions**, students are introduced to quadratic functions.

Parabolas

Vertical motion models are a basic example of how parabolas are used every day. Any time an object is tossed into the air, gravity has an effect on it, the object reaches a maximum height, and then falls back down to the ground.



In **Lesson 2: Key Characteristics of Quadratic Functions**, students are introduced to the various forms of quadratic functions.

Forms of Quadratics

There are three forms of quadratic functions that students will encounter and use in different ways. The standard form, which is also called the general form, is $f(x) = ax^2 + bx + c$.

Factored form is $f(x) = a(x - r_1)(x - r_2)$, where $a \neq 0$ and r_1 and r_2 represent the roots.

Vertex form is $f(x) = a(x - h)^2 + k$, where (h, k) represents the vertex of the function.

MYTH

Some students are "right-brain" learners, while other students are "left-brain" learners.

As you probably know, the brain is divided into two hemispheres: the right and the left. Some categorize people by their preferred or dominant mode of thinking. "Right-brain" thinkers are considered to be more intuitive, creative, and imaginative. "Left-brain" thinkers are said to be more logical, verbal, and mathematical.

The brain can also be broken down into lobes. The *occipital lobe* can be found in back of the brain, and it is responsible for processing visual information. The *temporal lobes*, which sit above your ears, process language and sensory information. The band across the top of your head is the *parietal lobe*, and it controls movement. Finally, the *frontal lobe* is where planning and learning occurs. Another way to think about the brain is from the back to the front, where information goes from highly concrete to abstract.

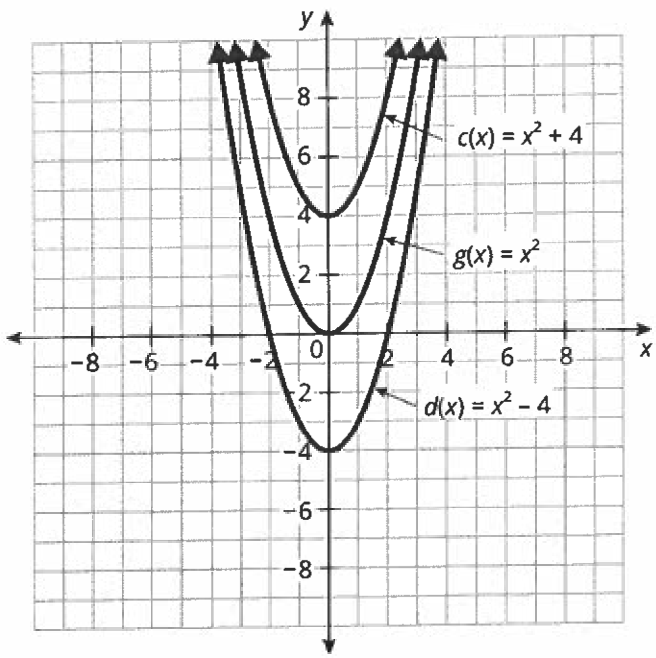
Why don't we claim that some people are "back of the brain" thinkers, who are highly concrete; whereas, others are "frontal" thinkers, who are more abstract? The reason is that the brain is a highly interconnected organ. Each lobe hands off information to be processed by other lobes, and they are constantly talking to each other. All of us are *whole-brain* thinkers!

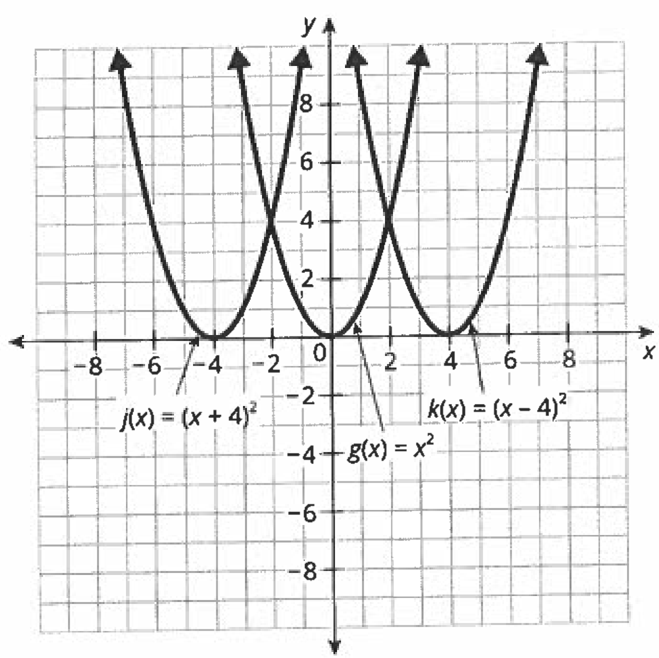
#mathmythbusted

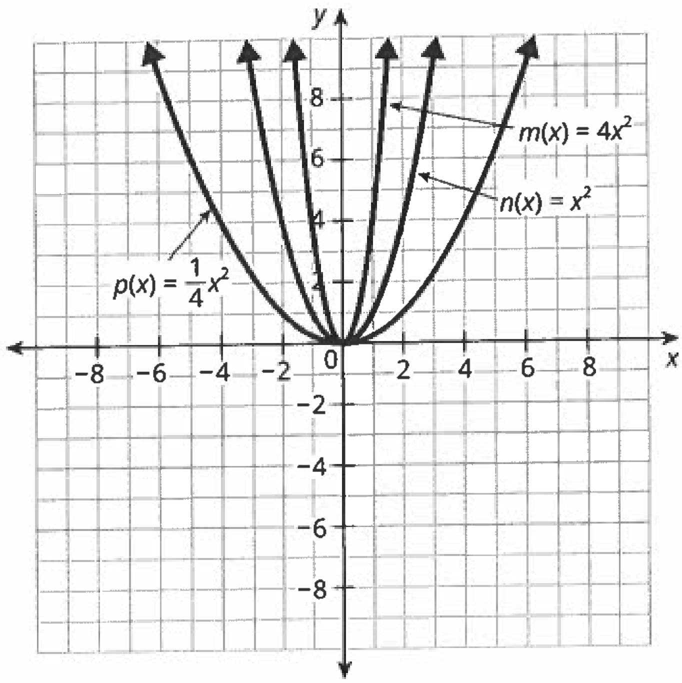
In **Lesson 3: Quadratic Function Transformations** and **Lesson 4: Horizontal Transformations and Vertex Form**, students expand their understanding of transformations to include quadratic functions.

Transformations

Transformations were first introduced with linear functions and are now applied to quadratic functions. Students will apply vertical and horizontal translations, vertical and horizontal dilations (stretches or compressions), and reflections across both axes.

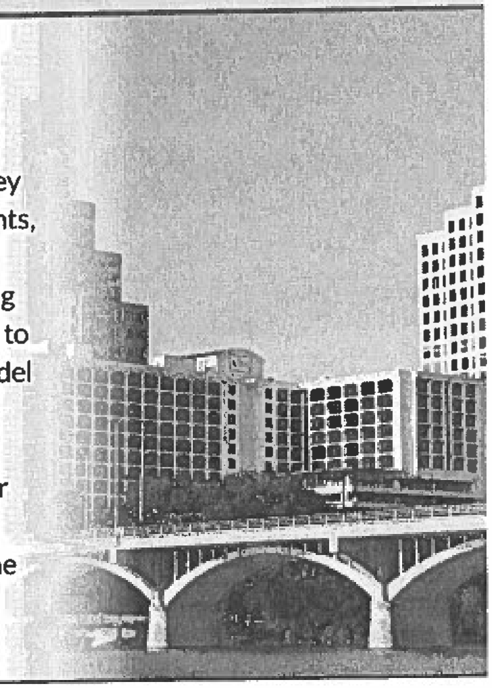






y
x
8
6
4
2
0
-8
-6
-4
-2
2
4
6
8
-2
-4
-6
-8
m(x) = 4x²
n(x) = x²
p(x) = 1/4 x²

TOPIC 2 Polynomial Operations



Polynomial Operations begins with a review of polynomials. Students sort various polynomial expressions on whatever basis makes sense to them—they can use what they already know about terms, powers, and leading coefficients, or they may sort using other prior knowledge. Students add and subtract polynomials, first with a graphical representation of a context, and then using algebra. They build upon their knowledge of algebra tiles and an area model to multiply binomials before using the distributive property. Using the area model to multiply binomials also prepares students to factor trinomials, which they will do in the next topic. Next, students learn to divide polynomials by using polynomial long division and they interpret what the quotient and remainder mean. They learn about the factor theorem and the remainder theorem, specifically that if a polynomial is divided by a linear expression, $x - r$, and the remainder is 0, then the expression $x - r$ is a factor of the polynomial. If the remainder is not 0, then $x - r$ is not a factor of the polynomial.

Where have we been?

Beginning in elementary school, students used area models to multiply. This tool is helpful in multiplying whole numbers, fractions, and mixed numbers, and in learning the distributive property. This prior knowledge helps students to multiply a monomial by a binomial and two binomials. It also serves as the foundation for factoring of a trinomial. In previous courses, students divided multi-digit numbers using standard algorithms, such as long division, and interpreted the remainders. Students will use this prior knowledge as they divide polynomials of degree two by polynomials of degree one using polynomial long division.

Where are we going?

In future courses, students use the distributive property to multiply complex numbers. A complex number is of the form $(a + bi)$; it has a real number term a and an imaginary term bi. They will multiply and then use the fact that $i^2 = -1$ to rewrite the expression.

TALKING POINTS

DISCUSS WITH YOUR STUDENT

Special products when multiplying binomials is an important topic to know about for college admissions tests.

HERE IS A SAMPLE QUESTION

What patterns do you notice between the factors and the products?

$(x - 4)(x + 4) = x^2 - 16$ $\quad$ $(x - 3)(x + 3) = x^2 - 9$

$(x + 4)(x + 4) = x^2 + 8x + 16$ $\quad$ $(x + 3)(x + 3) = x^2 + 6x + 9$

$(x - 4)(x - 4) = x^2 - 8x + 16$ $\quad$ $(x - 3)(x - 3) = x^2 - 6x + 9$

The *difference of two squares* is an expression in the form $a^2 - b^2$ that has factors $(a - b)(a + b)$.

A *perfect square trinomial* is an expression in the form $a^2 + 2ab + b^2$ or the form $a^2 - 2ab + b^2$.

NEW KEY TERMS

- polynomial [polinomio]
- monomial [monomio]
- binomial [binomio]
- trinomial [trinomio]
- degree of a polynomial [grado de un polinomio]
- difference of two squares
- perfect square trinomial
- factor theorem [teorema del factor]
- polynomial long division [división (larga) de polinomios]
- remainder theorem

Where are we now?

Polynomial long division is an algorithm for dividing one polynomial by another of equal or lesser degree.

$$
\begin{array}{r r}
 & 4x^2 - 6x + 3 \\
2x + 3 & \overline{)8x^3 + 0x^2 - 12x - 7} \\
 & -(8x^3 + 12x^2) \qquad\qquad \\
 & -12x^2 - 12x \qquad \\
 & -(-12x^2 - 18x) \qquad \\
 & 6x - 7 \\
 & -(6x + 9) \\
\text{Remainder} & -16
\end{array}
$$

In **Lesson 1: Adding and Subtracting Polynomials**, students are introduced to the formal definitions regarding polynomials. They also add and subtract functions both graphically and algebraically within a context.

Polynomials

A **polynomial** is an expression involving the sum of powers in one or more variables multiplied by coefficients. A polynomial in one variable is the sum of the form ax^k, where a, called the *coefficient*, is a real number and k is a non-negative integer. A polynomial is written in standard form when the terms are in descending order, starting with the term with the greatest degree and ending with the term with the least degree.

$$a_1x^k + a_2x^{k-1} + \ldots a_nx^0$$

Each product in a polynomial is called a *term*. Polynomials are named according to the number of terms: a **monomial** has exactly 1 term, a **binomial** has exactly 2 terms, and a **trinomial** has exactly 3 terms. The exponent of a term is the degree of the term, and the greatest exponent in a polynomial is the **degree of the polynomial**.

The characteristics of the polynomial $15x^3 + 7x + 3$ are shown in the chart.

	1st term	2nd term	3rd term
Term	$15x^3$	$7x$	3
Coefficient	15	7	3
Power	x^3	x^1	x^0
Exponent	3	1	0

This trinomial has a degree of 3 because 3 is the greatest degree of the terms in the trinomial.

Adding and Subtracting Polynomial expressions

Polynomials can be added or subtracted by identifying the like terms of the polynomial functions, using the associative property to group the like terms together, and combining the like terms to simplify the expression.

Example 1

Expression: $(7x^2 - 2x + 12) + (8x^3 + 2x^2 - 3x)$

The like terms are $7x^2$ and $2x^2$, and $-2x$ and $-3x$. The terms $8x^3$ and 12 are not like terms.

$(7x^2 - 2x + 12) + (8x^3 + 2x^2 - 3x)$
$8x^3 + (7x^2 + 2x^2) + (-2x - 3x) + 12$
$8x^3 + 9x^2 - 5x + 12$

Example 2

Expression: $(4x^4 + 7x^2 - 3) - (2x^2 - 5)$

The like terms are $7x^2$ and $2x^2$, and -3 and -5. The term $4x^4$ does not have a like term.
$(4x^4 + 7x^2 - 3) - (2x^2 - 5)$
$4x^4 + (7x^2 - 2x^2) + (-3 + 5)$
$4x^4 + 5x^2 + 2$

In **Lesson 2: Multiplying Polynomials**, students use algebra tiles and multiplication tables to multiply binomials.

Multiplying Binomials Using Algebra Tiles

Students can use algebra tiles to model two binomials and determine their product.

Modeling Binomials

Represent each binomial with algebra tiles.

x	1

$x + 1$

x	1	1

$x + 2$

Create an area model using each binomial

•	x	1	1
x	x^2	x	x
1	x	1	1

The product of $(x + 1)(x + 2)$ is $x^2 + x + x + x + 1 + 1$. This simplifies to $x^2 + 3x + 2$.

MYTH

"If I can get the right answer, then I should not have to explain why."

Sometimes, you get the right answer for the wrong reasons. Suppose a student is asked, "What is 4 divided by 2?" and she confidently answers "2!" If she does not explain any further, then it might be assumed that she understands how to divide whole numbers. But, what if she used the following rule to solve that problem? "Subtract 2 from 4 one time." Even though she gave the right answer, she has an incomplete understanding of division.

However, if she is asked to explain her reasoning, either by drawing a picture, creating a model, or giving a different example, the teacher has a chance to remediate her flawed understanding. If teachers aren't exposed to their students' reasoning for both right and wrong answers, then they won't know about or be able to address common misconceptions. This is important because mathematics is cumulative in the sense that new lessons build upon previous understandings.

You should ask your student to explain their thinking, when possible, even if you don't know whether the explanation is correct. When children (and adults!) explain something to someone else, it helps them learn. Just the process of trying to explain is helpful.

#mathmythbusted

Multiplying Binomials Using Multiplication Tables

Students can use multiplication tables to multiply binomials and determine the product.

$(9x - 1)(5x + 7)$

$\cdot$	$9x$	-1
$5x$	$45x^2$	$-5x$
7	$63x$	-7

$$\begin{aligned}(9x - 1)(5x + 7) &= 45x^2 - 5x + 63x - 7\\ &= 45x^2 + 58x - 7\end{aligned}$$

In **Lesson 3: Polynomial Division**, students are introduced to polynomial long division. They perform polynomial long division to determine the linear function that is the other factor, and students use this information to determine the zeros and rewrite the quadratic function as a product of linear factors.

Factor and Remainder Theorem

Students will use the factor theorem to show that a linear expression is a factor of a polynomial. After determining if a linear expression is a factor, they may use polynomial long division to determine the other factor of the polynomial.

If $f(x) = 3x^2 + 10x + 1$, to determine if $(x + 4)$ is a factor of $f(x)$, we must determine the value of $f(-4)$.

$f(-4) = 3(-4)^2 + 10(-4) + 1$
$f(-4) = 9$

This means the remainder when $f(x)$ is divided by $(x + 4)$ is 9, not 0; therefore, $(x + 4)$ is not a factor of $f(x) = 3x^2 + 10x + 1$.

Polynomial Long Division

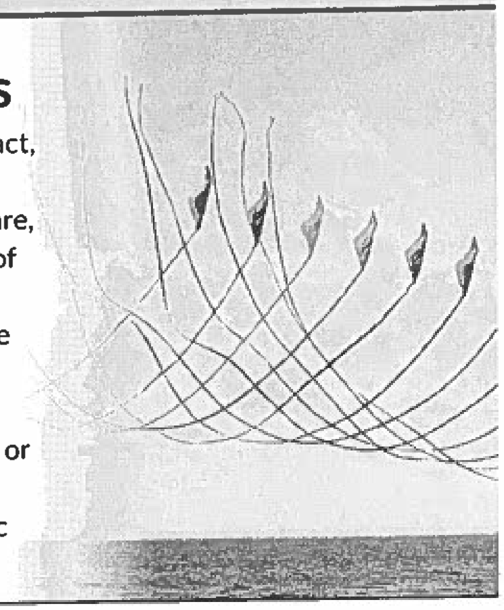
Polynomial long division is an algorithm for dividing one polynomial by another of equal or lesser degree. The process is similar to integer long division.

Integer Long Division	Polynomial Long Division
$3660 \div 12$ or $\frac{3660}{12}$ $\begin{array}{r} 305 \\ 12\overline{)3660} \\ \underline{-36} \\ 6 \\ \underline{-0} \\ 60 \\ \underline{-60} \\ 0 \end{array}$	$(2x^2 + 5x - 12) \div (x + 4)$ or $\frac{2x^2 + 5x - 12}{x + 4}$ $\begin{array}{rl} & \text{A } 2x \ \text{D } {-3} \\ x + 4 & \overline{)2x^2 + 5x - 12} \\ \text{B} & \underline{-(2x^2 + 8x)} \downarrow \ \text{C} \\ & -3x - 12 \\ & \underline{-(-3x - 12)} \\ & \text{Remainder } 0 \end{array}$ A. Divide $\frac{-x^2}{x} = 2x$. B. Multiply $2x(x + 4)$ and then subtract. C. Bring down -12. D. Divide $\frac{23x}{x} = -3$. E. Multiply $-3(x + 4)$ and then subtract.

Family Guide

MODULE 5 Maximizing and Minimizing

Algebra I



TOPIC 3 Solving Quadratic Equations

Students review polynomials. They use different methods to add, subtract, multiply, and divide polynomials. In this topic, students solve quadratic equations using the traditional methods—factoring, completing the square, and the quadratic formula—they use what they know about properties of equality, square roots, and parabolas to solve equations of the forms $x^2 = n$ and $ax^2 - c = n$. They then learn to factor or complete the square to solve quadratic equations and real-world problems. Next, students derive the quadratic formula. They see the structure of solutions to quadratic equations in the quadratic formula: the axis of symmetry plus or minus the distance to the parabola. Finally, students are presented with a real-world situation and use familiar strategies to complete a quadratic regression to determine the curve of best fit.

Where have we been?

Students know the characteristics that define a quadratic function. They have explored zeros of functions and have interpreted their meaning in contexts. Students know that the factored form of a quadratic equation gives the zeros of the function. They can sketch quadratic equations using key characteristics from an equation written in different forms. Students have extensive experience with locating solutions to equations using a graphical representation.

Where are we going?

The techniques for solving quadratics will be applicable as students solve higher-order polynomials in future math courses. Understanding the structure and symmetry of a quadratic equation allows students to solve quadratics with complex roots as well as higher-order polynomials.

TALKING POINTS

DISCUSS WITH YOUR STUDENT
Equivalent forms of quadratic equations is an important topic to know about for college admissions tests.

HERE IS A SAMPLE QUESTION

The graph of $y = (x - 8)(x + 2)$ is a parabola in the xy-plane. Rewrite the equation in an equivalent form so that the x- and y-coordinates of the vertex of the parabola appear as constants.

To solve this, students might use the process of completing the square.

$y = (x - 8)(x + 2)$
$y = x^2 - 6x - 16$
$y + 16 = x^2 - 6x$
$y + 16 + 9 = x^2 - 6x + 9$
$y + 25 = (x - 3)^2$

$y = (x - 3)^2 - 25$ is the vertex form of the equation of the parabola with vertex at $(3, -25)$.

NEW KEY TERMS

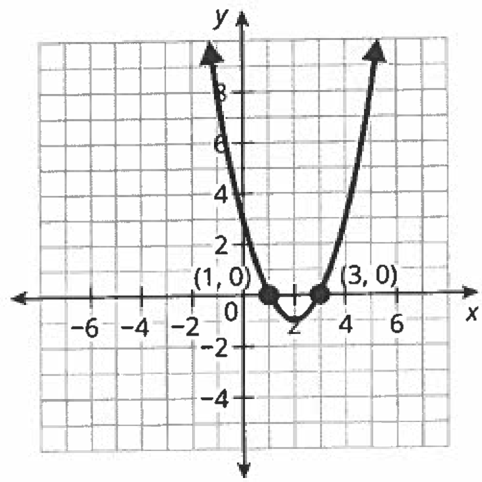
- principal square root
- roots [raíces]
- double root [raíz doble]
- zero product property [propiedad del producto cero]
- completing the square
- quadratic formula [fórmula cuadrática]
- discriminant [discriminante]

Refer to the Math Glossary for definitions of the New Key Terms.

Where are we now?

A **root** of an equation indicates where the graph of the equation crosses the *x*-axis.

The roots of the quadratic equation $x^2 - 4x + 3 = 0$ are $x = 3$ and $x = 1$.



The **quadratic formula** is $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ and can be used to calculate the solutions to any quadratic equation of the form $ax^2 + bx + c = 0$, where a, b, and c represent real numbers and $a \neq 0$.

The **discriminant** is the radicand expression in the quadratic formula which "discriminates" the number of real roots of a quadratic equation.

The discriminant in the quadratic formula is the expression $b^2 - 4ac$.

In **Lesson 2: Solutions to Quadratic Equations in Vertex Form,** students learn to solve quadratics equations of the form $y = a(x - h)^2 + k$.

For example, consider the equation $20 = 2(x - 1)^2 + 2$

$$1 \pm \sqrt{\frac{20-2}{2}} = x$$
$$1 \pm \sqrt{9} =$$
$$1 \pm 3 =$$

The solutions to the equation are 3 units away from the axis of symmetry, $x = 1$ The solutions are $x = -2$ and $x = 4$.

In **Lesson 3: Factoring and Completing the Square**, students learn to solve quadratic equations of the form $y = ax^2 + bx + c$.

Solving Quadratic Equation by Factoring

Students can factor trinomials by rewriting them as the product of two linear expressions. They can use factoring and the zero product property to solve quadratics in the form $y = ax^2 + bx + c$.

First, the equation is set equal to zero by adding 3 to each side. Next, the left side of the equation is divided into two factors, $(x - 3)$ and $(x - 1)$. Because the two factors multiply to equal zero, at least one of them must be equal to zero. This means that solving the equations $x - 1 = 0$ and $x - 3 = 0$ will result in at least one solution to the quadratic equation.

$$x^2 - 4x = -3$$
$$x^2 - 4x + 3 = -3 + 3$$
$$x^2 - 4x + 3 = 0$$
$$(x - 3)(x - 1) = 0$$

$$\begin{array}{rcl} (x - 3) = 0 & \text{or} & (x - 1) = 0 \\ x - 3 + 3 = 0 + 3 & \text{or} & x - 1 + 1 = 0 + 1 \\ x = 3 & \text{or} & x = 1 \end{array}$$

Completing the Square to Determine Roots

Students can use the completing the square method to determine the roots of a quadratic equation that cannot be factored.

Determine the roots of the equation $x^2 + 10x + 12 = 0$.

Isolate $x^2 + 10x$. You can complete the square and rewrite this as a perfect square trinomial.

$$x^2 + 10x + 12 - 12 = 0 - 12$$
$$x^2 + 10x = -12$$

Determine the constant term that would complete the square. Add this term to both sides of the equation.

$$x^2 + 10x + \_\_\_ = -12 + \_\_\_$$
$$x^2 + 10x + 25 = -12 + 25$$
$$x^2 + 10x + 25 = 13$$

Factor the left side of the equation.

$$(x + 5)^2 = 13$$

Determine the square root of each side of the equation.

$$\sqrt{(x + 5)^2} = \pm\sqrt{13}$$
$$x + 5 = \pm\sqrt{13}$$

Set the factor of the perfect square trinomial equal to each square root of the constant. Solve for x.

$$\begin{array}{lcl} x + 5 = \sqrt{13} & \text{and} & x + 5 = -\sqrt{13} \\ x = -5 + \sqrt{13} & \text{and} & x = -5 - \sqrt{13} \\ x \approx -1.39 & \text{and} & x \approx -8.61 \end{array}$$

The roots are approximately -1.39 and -8.61.

In **Lesson 4: The Quadratic Formula**, students derive the quadratic formula. They then use the quadratic formula to solve problems in and out of context.

MYTH

"Once I understand something, it has been learned."

Learning is tricky for three reasons. First, even when we learn something, we don't always recognize when that knowledge is useful. For example, you know there are four quarters in a dollar. But if someone asks you, "What is 75 times 2?" you might not immediately recognize that is the same thing as having six quarters.

Second, when you learn something new, it's not as if the old way of thinking goes away. For example, some children think of north as straight ahead. But have you ever been following directions on your phone and made a wrong turn, only to catch yourself and think, "I know better than that!"

The final reason that learning is tricky is that it is balanced by a different mental process: forgetting. Even when you learn something (for example, your locker combination), when you stop using it (for example, you get a new locker), it becomes extremely hard to remember.

There should always be an asterisk next to the word when we say we learned* something.

#mathmythbusted

Quadratic Formula

You can use the **quadratic formula**, $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ to calculate the solutions to any quadratic equation of the form $ax^2 + bx + c = 0$, where a, b, and c represent real numbers and $a \neq 0$.

For example, given the function $f(x) = 2x^2 - 4x - 3$ we can identify the values of a, b, and c.

$$a = 2;\ b = -4;\ c = -3$$

Then, we use the quadratic formula to solve.

$$x = \frac{-(-4) \pm \sqrt{(-4)^2 - 4(2)(-3)}}{2(2)}$$

$$x = \frac{4 \pm \sqrt{16 + 24}}{4}$$

$$x = \frac{4 \pm \sqrt{40}}{4}$$

$$x \approx \frac{4 + 6.325}{4} \approx 2.581 \quad \text{or} \quad x \approx \frac{4 - 6.325}{4} \approx -0.581$$

The roots are approximately 2.581 and (−0.581).

A quadratic function can have one real zero, two real zeros, or at times, no real zeros.

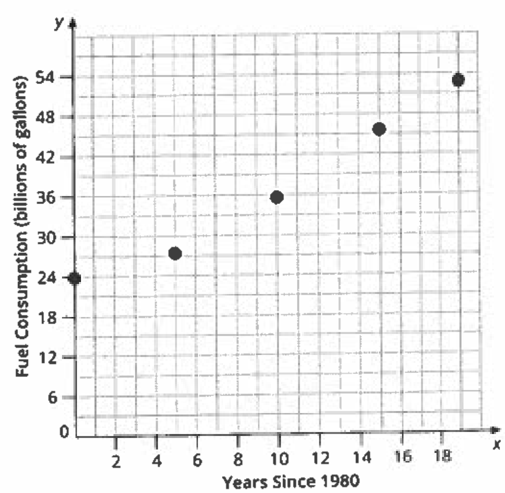
In **Lesson 5: Using Quadratic Functions to Model Data,** students determine a quadratic regression model for of data, and they use the regression models to make estimates and predictions.

Quadratic Regression

Similar to the regression models used with linear and exponential data, some situations are best modeled with quadratic regression models. After choosing the type of regression model to best model the situation, it can then be used to make predictions for the data.

The regression model for this data is $y = 0.0407x^2 + 0.809x + 23.3$.

Years Since 1980	Fuel Consumption (billions of gallons)
0	23.8
5	27.4
10	35.6
15	45.6
19	52.8



Hooks ISD				
Section 504 Initial Evaluation				
Student ID	**Student Name**	**Age**	**Date of Birth**	**Gender**
637089524	Addison Jones	18	4/30/2007	F
Academic Year	**Current Campus**	**Grade**		
2024-25	Hooks High School (9-12)	12		

Date of Evaluation 5/2/2025
Date of Referral 5/2/2025
Type of Evaluation Initial
Referred by Jennifer Cooper, mother

Committee Membership

By regulation, the Section 504 Committee is a group of knowledgeable people. List each member attending and indicate the area of knowledge each provides. Each type of knowledge must be present for the Committee to be properly constituted under Federal law for Section 504 purposes. Note that Committee members can have more than one type of knowledge.

The following individuals have knowledge of:	Name, Position/Title
The Child	parents, teacher
The meaning of the evaluation data	teacher, coordinator, administrator
The placement options	teacher, coordinator, administrator

Procedural Checklist

The district verifies that the parent consented to §504 initial evaluation.

The district verifies that the §504 Committee is a group, including a person with knowledge in each of the required areas.

Addison's dominant language is **English**. The dominant language of the home is **English**.

The district verifies that the parent was informed of the date, time, and place for this evaluation: In Writing.

The district verifies that the parent received Notice of Parent Rights under §504.

Section 504 Eligibility

Evaluation Data Considered from a Variety of Sources

The Committee reviewed and carefully considered data gathered from a variety of sources, recent enough to afford an understanding of the behavior and disability, including the Referral Document.

- ☑ Yes ☐ No Parent Input
  both parents attended meeting
- ☐ Yes ☑ No Student work portfolio
  student is passing all classes
- ☑ Yes ☐ No Teacher/Administrator Input & Recommendations
  in file
- ☐ Yes ☑ No Special education records (specify)
  N/A
- ☐ Yes ☑ No Aptitude and Achievement Tests
  EOCs considered
- ☐ Yes ☑ No Social or cultural background
- ☐ Yes ☑ No Other Tests
- ☐ Yes ☑ No Disciplinary records/referrals
  no discipline records
- ☐ Yes ☑ No Early intervention data
  senior student
- ☐ Yes ☑ No Mitigating measures
  completed dual credit classes
- ☑ Yes ☐ No Grade reports
  skyward
- ☐ Yes ☑ No Adaptive behavior

☐ Yes ☑ No School health information

☑ Yes ☐ No Medical evaluations/diagnoses/physical condition
Dr. Brian Smith eval

☑ Yes ☐ No State Test Information
EOC

☐ Yes ☑ No Other

Eligibility Determination

As directed by Congress in the ADAAA, the Section 504 Committee understands that the definition of disability "shall be construed in favor of broad coverage of individuals under this Act, to the maximum extent permitted by the terms of this Act."

Eligibility Question 1

☑ Yes ☐ No 1. Does Addison have a physical or mental impairment? If so, please identify the impairment(s) in the box below. Notes (1) This is an educational determination only, and not a medical diagnosis for purposes of treatment. (2) Impairments that are episodic, in remission or mitigated should also be listed. (3) OCR guidance indicates that in "virtually every case," diabetes, epilepsy, bipolar disorder and autism will result in eligibility under Section 504. Extensive documentation or analysis should not be required for these four impairments. If you answered "yes" to Question 1, identify the impairment(s) here. (4) A student who has been diagnosed with ADHD following a comprehensive evaluation by a licensed clinician, such as a pediatrician, psychologist, or psychiatrist with expertise in ADHD and in accordance with NIMH standards for comprehensive evaluations is presumed eligible unless there is data to the contrary. (5) For a student with multiple impairments, use additional copies of this page if necessary for clarity.
ADHD

Eligibility Question 2

☑ Yes ☐ No 2. Does the physical or mental impairment affect one or more major life activities (including major bodily functions)? If so, identify the major life activity or major bodily function by checking the appropriate box or boxes. Note: For an impairment that is episodic, in remission, or mitigated, identify the activity or function affected when the disability was present or active.
Major Life Activities include, but are not limited to:

Eligibility Question 3

☑ Yes ☐ No 3. Does the physical or mental impairment substantially limit a major life activity?

Notes: (1) "Substantially limits" does not mean "significantly restricted." (2) This question asks whether the person evaluated is substantially limited in performing a major life activity as compared to the "average student" of the same grade or age or as compared to "most students" of the same grade or age. (3) The ADAAA requires that when making this determination, the Committee should not consider the ameliorative (helpful or positive) effects of mitigating measures (except for ordinary eyeglasses or contact lenses). (4) The fact that the impairment is episodic (the impact of the impairment is sometimes substantially limiting, but not always), or in remission, does not preclude eligibility if the impairment would substantially limit a major life activity when active. (5) If at the conclusion of the evaluation the Committee is uncertain as to whether Addison is sufficiently impacted by the impairment to be substantially limited (but has been able to identify impairment(s) and impact to one or more major life activities), then due to Congress' expressed desire for expanded eligibility and the less demanding substantial limitation standard after the ADAAA, Addison should be considered substantially limited.

Plan and Placement

☐ Yes ☑ No Does Addison need Section 504 services in order for her educational needs to be met as adequately as those of non-disabled peers? Notes: (1) If Addison's needs are so extreme as to require special education and related services, a referral to special education should be considered. (2) If Addison's impairment is in remission, and creates no need for services or accommodations, Addison is not in need of a §504 Services Plan. (3) If Addison's needs are currently addressed by mitigating measures with no need for additional services or accommodations, and the mitigating measures are provided or implemented by Addison or parents, with no action required by the school, Addison is not in need of a §504 Services Plan. If the Plan and Placement question is answered "no," explain why Addison does not need a Section 504 Services Plan:
Addison's needs are currently being met as adequately as her nondisabled peers. Currently no data to support the need for accommodations.
If the Plan and Placement question is answered "yes", list Addison's needs as identified through this evaluation.

Analyzing the Results of the Committee's Answers

1. If all four questions are answered "YES", Addison is eligible for both the nondiscrimination and FAPE (Section 504 Services Plan) protections of Section 504. The Section 504 Committee will create a Section 504 Services Plan for this Student.
2. If only the first three questions are answered "YES", Addison is eligible for the nondiscrimination protections of Section 504, together with manifestation determination, procedural safeguards, and periodic Re-Evaluation (at least every three years) or more often as needed. The Section 504 Committee will not create a Section 504 Services Plan at this time as Addison's needs are currently being met as adequately as her nondisabled peers. Should such a need develop, the §504 Committee shall re-convene and develop an appropriate Section 504 Services Plan at that time.
3. If any of the first three answers is "NO", Addison is not eligible for Section 504 nondiscrimination protection and is not eligible for a Section 504 Services Plan.

Committee's Decision

The §504 Committee's analysis of the eligibility criteria as applied to the evaluation data indicates that at this time:

§504 Eligible + No Plan (Mitigating Measures)

Addison is eligible under §504, but will not require a §504 Services Plan because Addison's needs are met as adequately as her nondisabled peers due to the positive effect of mitigating measures currently in use. Addison will receive manifestation determination, procedural safeguards, periodic re-evaluation or more often as needed, as well as the nondiscrimination protections of §504. Should need for a Plan develop, the §504 Committee shall reconvene and develop an appropriate §504 Services Plan. This result applies when the mitigating measures are neither provided by nor implemented by the School.

Texas General Education Homebound

As part of the §504 evaluation, the Committee considered Addison's eligibility for Texas General Education Homebound.

Addison is not eligible for Texas General Education Homebound.

Additional Notes

Comedy & Tragedy

Masks about Me

Drawing Instructions:

On page one, you are to design and color each mask to tell a story about yourself!

On the comedy mask, you need to include:

1.) something that makes you laugh
2.) a memory that makes you smile
3.) your favorite color

On the tragedy mask, you will need to include:

1). something that you do not like
2.) a memory from a hard time that you overcame
3.) your LEAST favorite color

The mask decoration should be neat, fully colored, and symbolic.

Please do not draw anything you are not comfortable sharing with the class. We will present these!