Learning Targets

## Learning Targets

### Polynomials and Rational Functions

### Lesson 1: Let’s Make a Box

* I can create and interpret a polynomial that models the volume of a box.

### Lesson 2: Funding the Future

* I can use polynomials to understand different kinds of situations.

### Lesson 3: Introducing Polynomials

* I can identify important characteristics of polynomial graphs and expressions.

### Lesson 4: Combining Polynomials

* I understand that if you add, subtract, or multiply polynomials, you get another polynomial.

### Lesson 5: Connecting Factors and Zeros

* I can find the zeros of a function from its factored form.

### Lesson 6: Different Forms

* I can identify features of polynomials and their graphs using their standard and factored forms.

### Lesson 7: Using Factors and Zeros

* I can write an expression for a function that has specific horizontal intercepts.

### Lesson 8: End Behavior (Part 1)

* I understand why a function's end behavior is determined by its leading term.

### Lesson 9: End Behavior (Part 2)

* I can identify the end behavior of a polynomial function from its equation.

### Lesson 10: Multiplicity

* I can use zeros and multiplicities to sketch a graph of a polynomial.

### Lesson 11: Finding Intersections

* I can find where two polynomial functions intersect.

### Lesson 12: Polynomial Division (Part 1)

* I can divide one polynomial by another.

### Lesson 13: Polynomial Division (Part 2)

* I can use long division to divide polynomials.

### Lesson 14: What Do You Know About Polynomials?

* I can use division to rewrite a polynomial in factored form starting from a known factor and then sketch what it looks like.

### Lesson 15: The Remainder Theorem

* I understand the remainder theorem and why it's true.

### Lesson 16: Minimizing Surface Area

* I can write a rational function to model different properties of cylinders.

### Lesson 17: Graphs of Rational Functions (Part 1)

* I can identify a vertical asymptote from a graph or an equation of a rational function.

### Lesson 18: Graphs of Rational Functions (Part 2)

* I can identify a horizontal asymptote from a graph or an equation of a rational function.

### Lesson 19: End Behavior of Rational Functions

* I can find the end behavior of a rational function by rewriting it as $f(x)=q(x)+\frac{r(x)}{b(x)}$.

### Lesson 20: Rational Equations (Part 1)

* I can write rational expressions that represent averages to answer questions about the situation.

### Lesson 21: Rational Equations (Part 2)

* I can write and solve equations with simple rational expressions on each side.

### Lesson 22: Solving Rational Equations

* I know how to check for extraneous solutions to rational equations.

### Lesson 23: Polynomial Identities (Part 1)

* I understand what an identity is in mathematics.

### Lesson 24: Polynomial Identities (Part 2)

* I can justify why identities are true.

### Lesson 25: Summing Up

* I understand why the geometric sum formula is true.

### Lesson 26: Using the Sum

* I can use the geometric sum formula to solve problems.



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