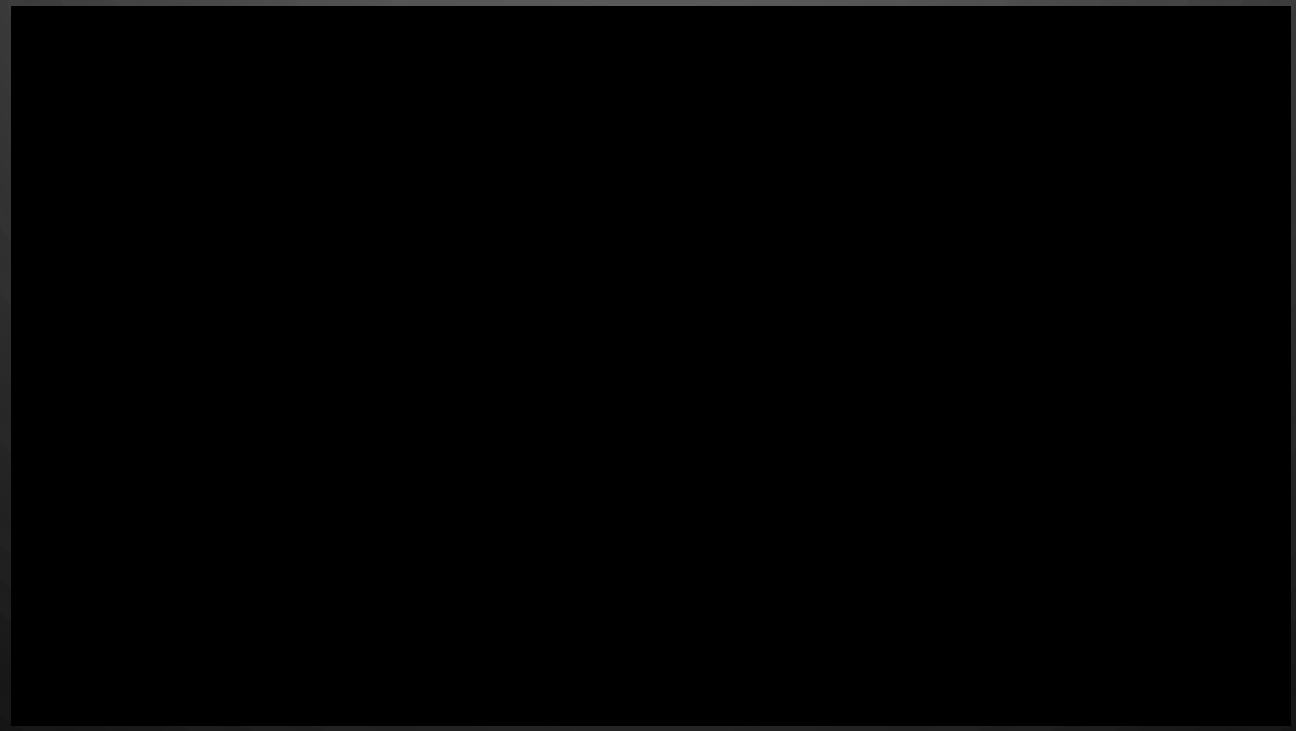
THE STORY SO FAR…

THE PYTHAGOREAN THEOREM



USES OF THE PYTHAGOREAN THEOREM

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- SOLVE RIGHT TRIANGLE APPLICATIONS

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- SOLVE RIGHT TRIANGLE APPLICATIONS
- THE STANDARD EQUATION OF A CIRCLE

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USES OF THE PYTHAGOREAN THEOREM

- SOLVE RIGHT TRIANGLE APPLICATIONS
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- ABSOLUTE VALUE OF A COMPLEX NUMBER

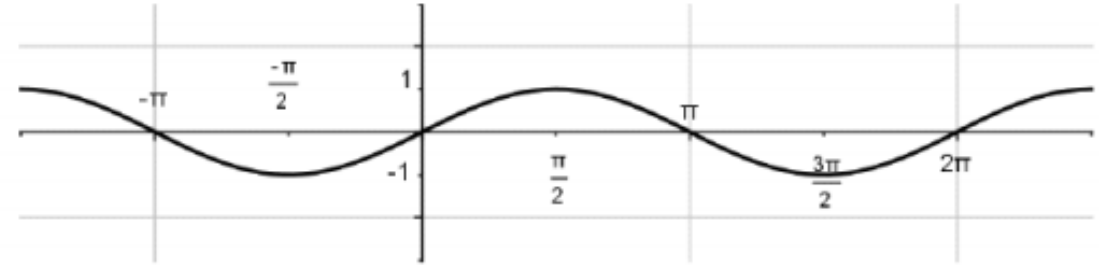
USES OF THE PYTHAGOREAN THEOREM

- SOLVE RIGHT TRIANGLE APPLICATIONS
- THE STANDARD EQUATION OF A CIRCLE
- DISTANCE FORMULA
- MAGNITUDE OF A VECTOR
- ABSOLUTE VALUE OF A COMPLEX NUMBER
- POLAR COORDINATES

TRIGONOMETRIC FUNCTIONS

GRAPHS

GRAPHS

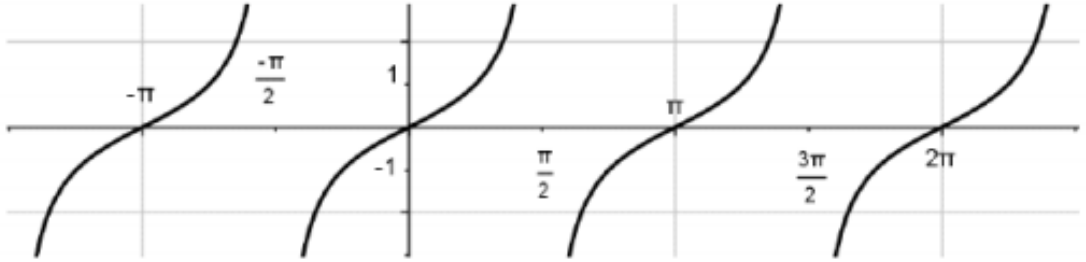


Sine Function

$f(x) = \sin(x)$

Cosine Function

$f(x) = \cos(x)$

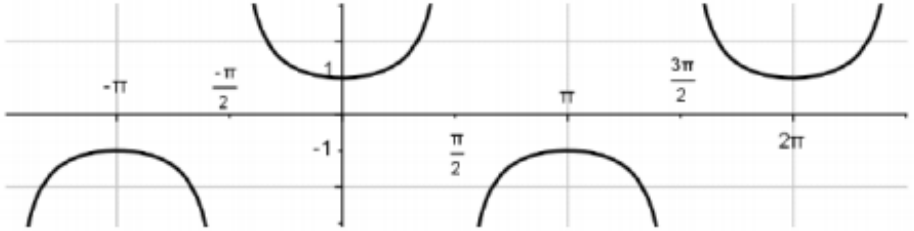


Tangent Function

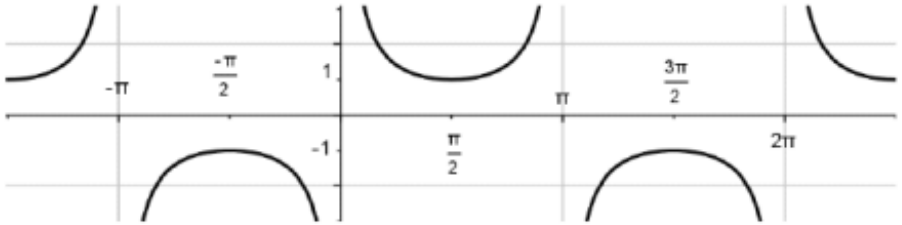
$f(x) = \tan(x)$

GRAPHS

Cotangent Function
$f(x) = \cot(x)$



Secant Function
$f(x) = \sec(x)$



Cosecant Function
$f(x) = \csc(x)$

SEQUENCES AND SERIES

SEQUENCES AND SERIES

- A **SEQUENCE** CAN BE THOUGHT OF AS A FUNCTION WITH DOMAIN THE NATURAL NUMBERS.

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  - EXPLICIT

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  - EXPLICIT
  - RECURSIVE

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SEQUENCES AND SERIES

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  - EXPLICIT
  - RECURSIVE
  - SEQUENCE HALL OF FAME
  - ARITHMETIC

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  - ARITHMETIC
  - GEOMETRIC (HOW MANY PEOPLE DID IT TAKE TO MAKE YOU!!!)

SEQUENCES AND SERIES

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SEQUENCES AND SERIES

- A **SEQUENCE** CAN BE THOUGHT OF AS A FUNCTION WITH DOMAIN THE NATURAL NUMBERS.
  - EXPLICIT
  - RECURSIVE
  - SEQUENCE HALL OF FAME
  - ARITHMETIC
  - GEOMETRIC (HOW MANY PEOPLE DID IT TAKE TO MAKE YOU!!!)
  - SERIES
  - BINOMIAL THEOREM

POLYNOMIALS

POLYNOMIALS

- REMAINDER THEOREM

POLYNOMIALS

- REMAINDER THEOREM
- FACTOR THEOREM

POLYNOMIALS

- REMAINDER THEOREM
- FACTOR THEOREM
- RATIONAL ZERO THEOREM

POLYNOMIALS

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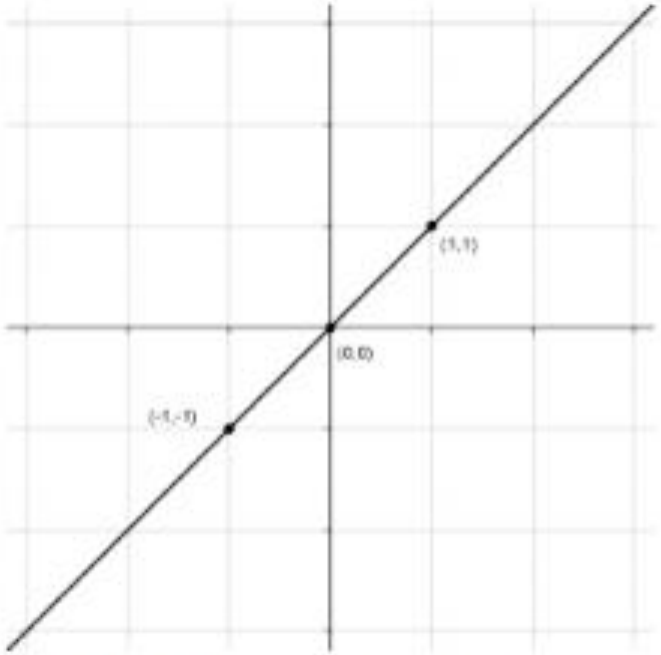
- FACTOR THEOREM
- RATIONAL ZERO THEOREM
- FUNDAMENTAL THEOREM OF ALGEBRA

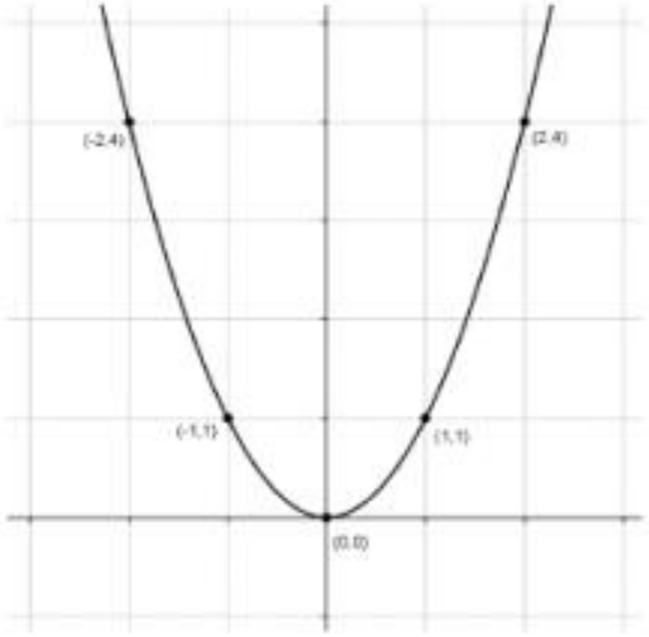
POLYNOMIALS

- REMAINDER THEOREM
- FACTOR THEOREM
- RATIONAL ZERO THEOREM
- FUNDAMENTAL THEOREM OF ALGEBRA
- CONJUGATE PAIRS THEOREM

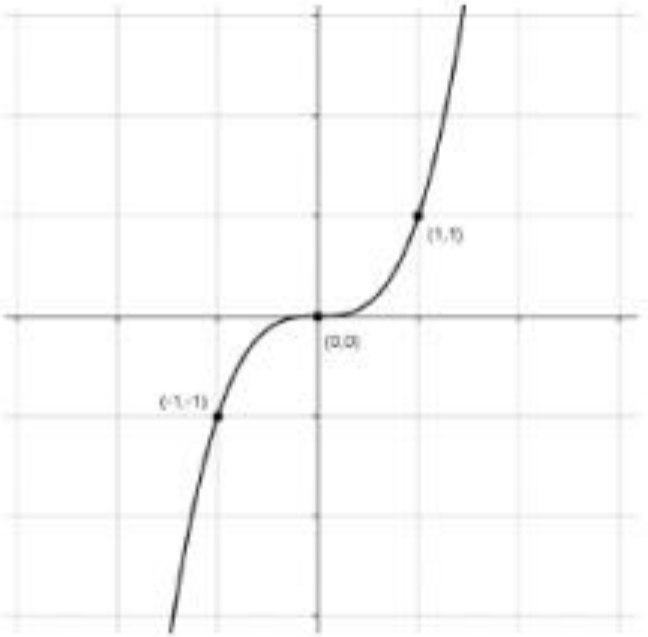
BASIC GRAPHS OF POLYNOMIALS



Identity Function: $f(x) = x$



Square Function: $f(x) = x^2$



Cube Function: $f(x) = x^3$

RATIONAL FUNCTIONS

RATIONAL FUNCTIONS

- VERTICAL ASYMPTOTES

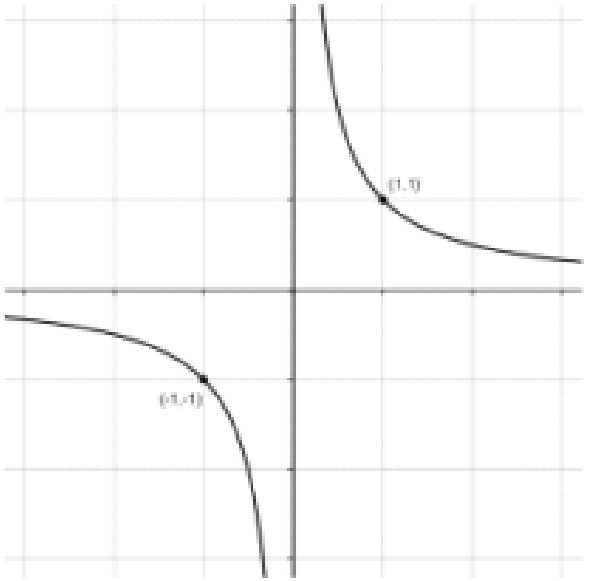
RATIONAL FUNCTIONS

- VERTICAL ASYMPTOTES
- HORIZONTAL ASYMPTOTES

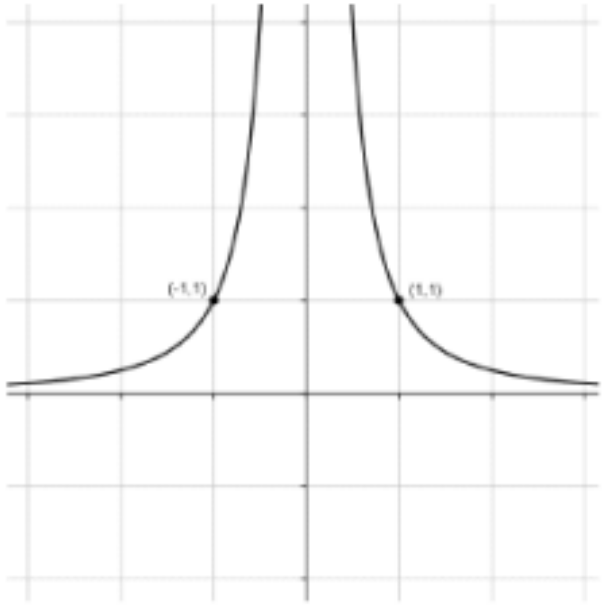
RATIONAL FUNCTIONS

- VERTICAL ASYMPTOTES
- HORIZONTAL ASYMPTOTES
- SLANT ASYMPTOTES

BASIC GRAPHS OF RATIONAL FUNCTIONS



Reciprocal Function : $f(x) = \frac{1}{x}$



$f(x) = \frac{1}{x^2}$

EXPONENTIAL AND LOGARITHMIC FUNCTIONS

EXPONENTIAL AND LOGARITHMIC FUNCTIONS

- INVERSE AND COMPOSITE FUNCTIONS

EXPONENTIAL AND LOGARITHMIC FUNCTIONS

- INVERSE AND COMPOSITE FUNCTIONS
- PROPERTIES OF LOGARITHMS

EXPONENTIAL AND LOGARITHMIC FUNCTIONS

- INVERSE AND COMPOSITE FUNCTIONS
- PROPERTIES OF LOGARITHMS
- SOLVING EQUATIONS

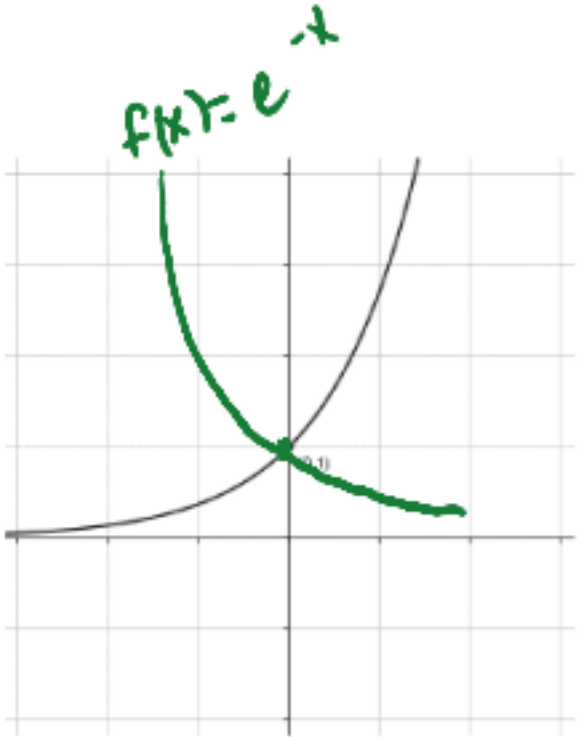
EXPONENTIAL AND LOGARITHMIC FUNCTIONS

- INVERSE AND COMPOSITE FUNCTIONS
- PROPERTIES OF LOGARITHMS
- SOLVING EQUATIONS
- E

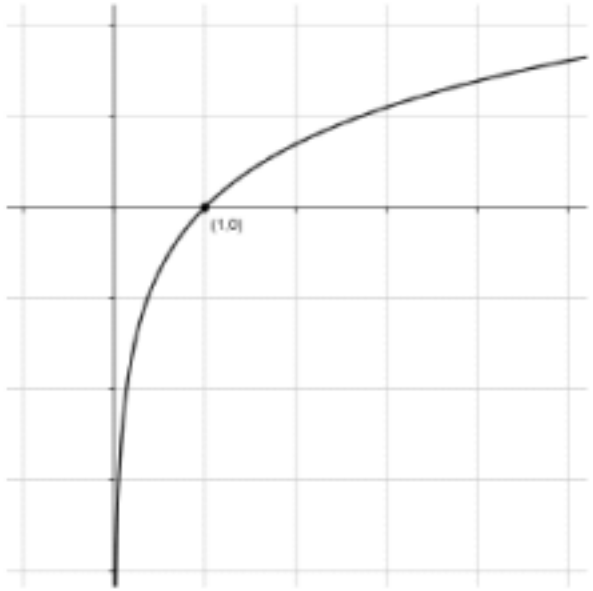
EXPONENTIAL AND LOGARITHMIC FUNCTIONS

- INVERSE AND COMPOSITE FUNCTIONS
- PROPERTIES OF LOGARITHMS
- SOLVING EQUATIONS
- E
- APPS! (HOW TO BECOME A MILLIONAIRE!!)

BASIC GRAPHS

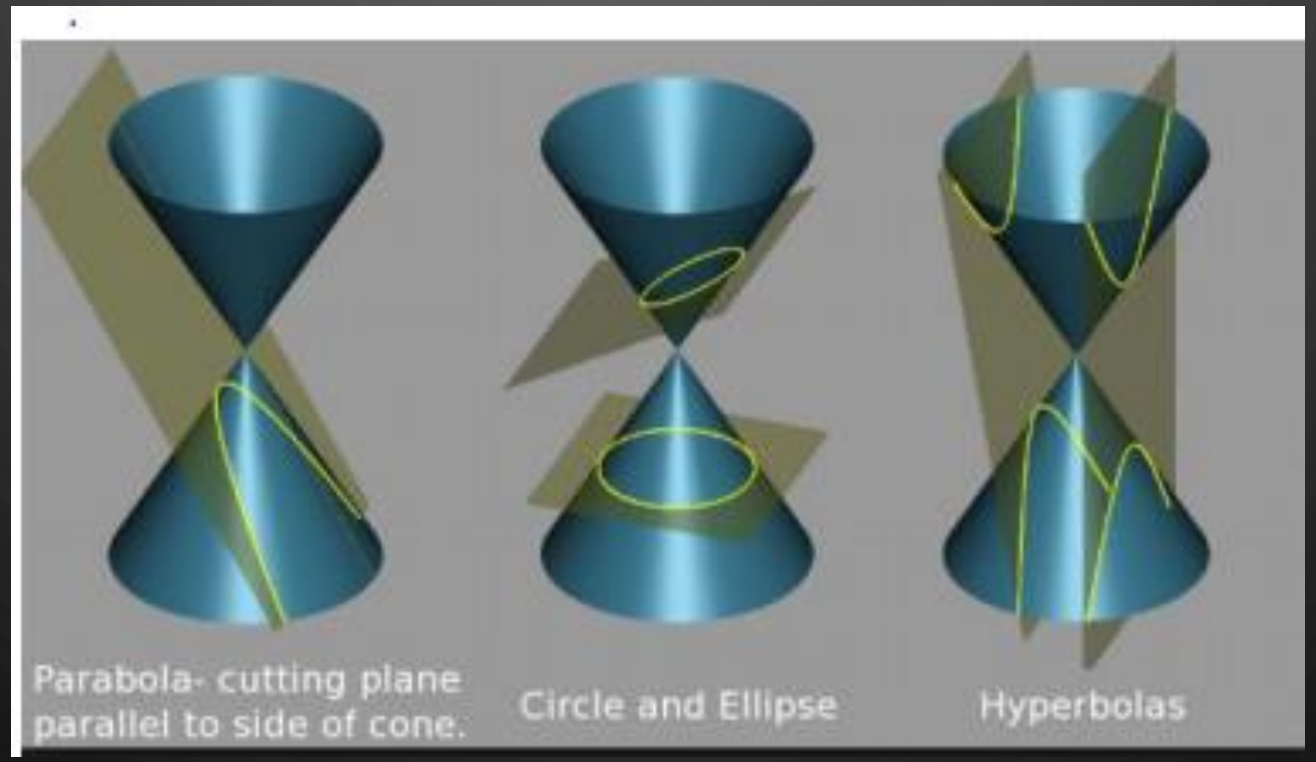


Exponential Function: $f(x) = e^x$



Natural Logarithm Function: $f(x) = \ln(x)$

CONIC SECTIONS



CONIC SECTIONS

- PARABOLA (APPS!)

CONIC SECTIONS

- PARABOLA (APPS!)
- ELLIPSE

CONIC SECTIONS

- PARABOLA (APPS!)
- ELLIPSE
- HYPERBOLA

CONIC SECTIONS

- PARABOLA (APPS!)
- ELLIPSE
- HYPERBOLA
- POLAR COORDINATES

SYSTEMS OF EQUATIONS AND MATRICES

SYSTEMS OF EQUATIONS AND MATRICES

- SYSTEMS OF TWO EQUATIONS (AND INEQUALITIES), TWO UNKNOWNS (LINEAR AND NONLINEAR!)

SYSTEMS OF EQUATIONS AND MATRICES

- SYSTEMS OF TWO EQUATIONS (AND INEQUALITIES), TWO UNKNOWNS (LINEAR AND NONLINEAR!)
- PARTIAL FRACTIONS

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- PARTIAL FRACTIONS
- GAUSSIAN ELIMINATION

SYSTEMS OF EQUATIONS AND MATRICES

- SYSTEMS OF TWO EQUATIONS (AND INEQUALITIES), TWO UNKNOWNS (LINEAR AND NONLINEAR!)
- PARTIAL FRACTIONS
- GAUSSIAN ELIMINATION
- MATRICES (HUGE FOR MANIPULATING DATA)