

MY

MATH III

FORMULA

BOOK

# FUNCTION FAMILIES

$$f(x) = a f(x - h) + k$$

DOMAIN	RANGE
TRANSFORMATIONS	
Flip	Stretch/Compression
Horizontal	Vertical

# INVERSE FUNCTIONS

How to find an inverse function



# QUADRATIC FUNCTIONS

Standard Form:  $f(x) = ax^2 + bx + c$

Find vertex by completing the square

Or short cut

Vertex Form:  $f(x) = a(x - h)^2 + k$

Vertex:

Opens up if:

## SOLVE QUADRATICS BY...

Factoring

Quadratic Formula

Graphing

# POLYNOMIAL FUNCTIONS

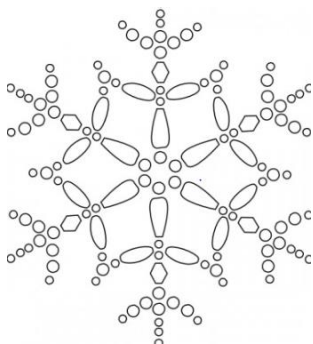
$$f(x) = a_n x^n + a_{n-1} x^{n-1} + \dots + a_0 x^0$$

Pascal's Triangle

Binomial Expansion

Complex Numbers

Steps to find all roots



# RATIONAL FUNCTIONS

$$f(x) = \frac{p(x)}{q(x)}$$

## HOW TO FIND...

Holes
Vertical Asymptotes
Horizontal Asymptotes
x intercepts
y intercepts



# EXPONENTIAL FUNCTIONS

$$f(x) = a(b)^{x-h} + k$$

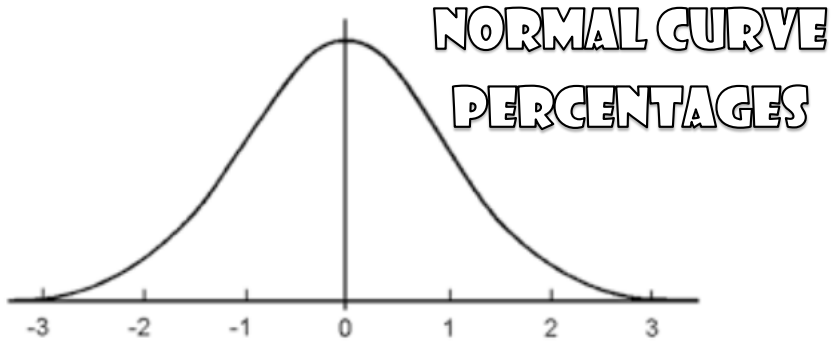
Properties of Exponents
Simple Growth and Decay Formula
Periodic Compounding Formula
Continuous Compounding Formula

# LOGARITHMIC FUNCTIONS

$$f(x) = a \log_b(x - h) + k$$

<b>THE</b> Relationship between Logarithms and Exponential Functions
Properties of Logarithms
Change of Base Formula

# STATISTICS

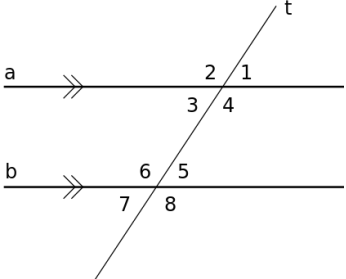


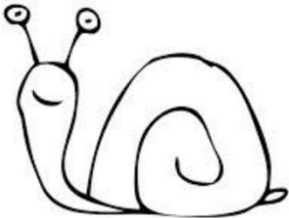
Mean
Standard Deviation
z-Score

# SEQUENCES AND SERIES

	ARITHMETIC	GEOMETRIC
Series		
Sequence		

# GEOMETRY

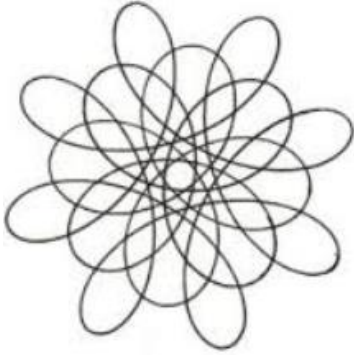
CONGRUENT TRIANGLES	SIMILAR TRIANGLES
SSS	SSS
SAS	SAS
ASA	AAA
AAS	<b>Parallel Line Properties</b>
HL	 <p data-bbox="532 1282 824 1315">Congruent Angles Pairs:</p>





# GEOMETRY

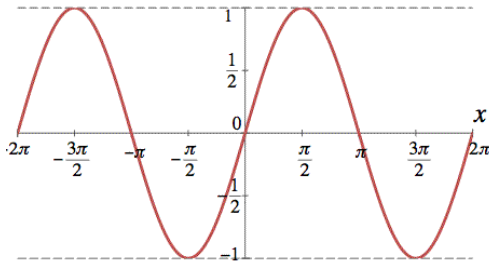
INTERIOR ANGLES	EXTERIOR ANGLES
Central	Secant/Secant
Inscribed	Tangent/Tangent
Tangent/Chord	Secant/Tangent
Intersecting Chords	Arc Length
	Sector Area



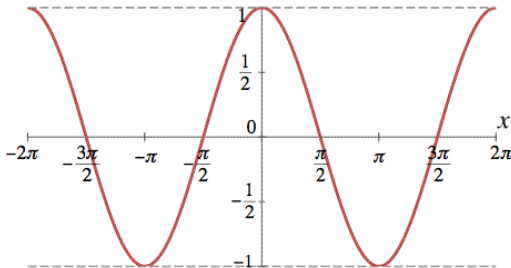
DOODLE HERE

# TRIGONOMETRY

$$f(x) = a \sin b(x - h) + k$$



$$f(x) = a \cos b(x - h) + k$$



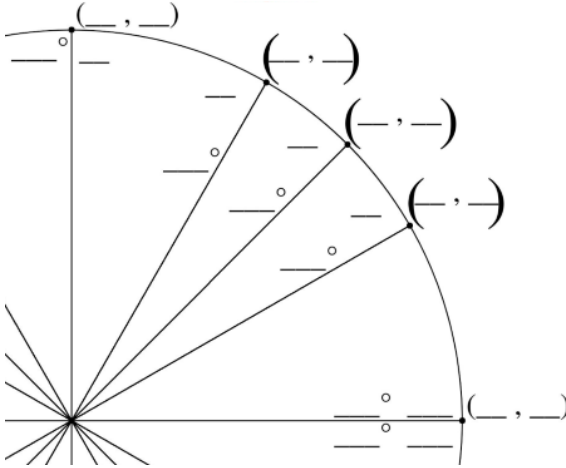
Amplitude:	Period:
Phase Shift:	Mid Line:

## IDENTITIES

Basic Identities

# TRIGONOMETRY

## UNIT CIRCLE, FIRST QUADRANT

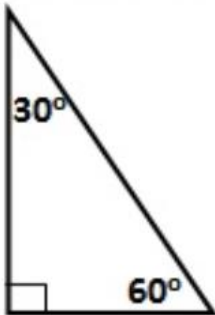


Convert  
Degrees to  
Radians:

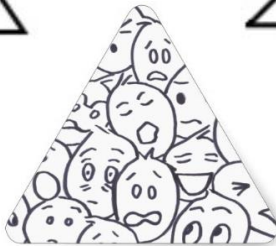
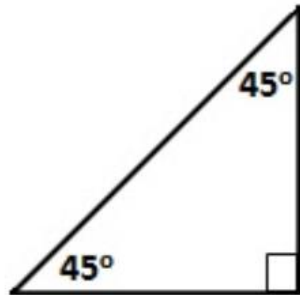
Convert Radians  
to Degrees

## SPECIAL RIGHT TRIANGLES

### 30-60-90 Triangle



### 45-45-90 Triangle



# CALCULATOR

## TIPS

### HOW DO YOU...

Clear Memory
Convert Decimal Values   To Fraction
Find Max and Min
Find x intercepts
Find y intercepts
Reset graph viewing window
Find appropriate viewing window
Find Standard Deviation
Create quadratic and cubic models
Find intersection of two functions
Change Log Base
Calculate Summations
Other

