

## **AP Cal Summer Assignment (2026-2027)**

Students transitioning from Pre Cal to AP Cal must complete the following assignment prior to the first day of the 2026–27 school year.

### **Assignment Instructions**

1. Go to [www.ixl.com](http://www.ixl.com)
2. Log into your IXL account.
3. Click Learning → Math → Pre Cal.
4. Complete each assigned skill topic listed by your teacher.
5. Reach a Smart Score of 85 or higher on each topic.

### **Important**

- This assignment will count as a TEST GRADE.
- It is DUE ON THE FIRST DAY OF SCHOOL.
- No late or partial credit will be given.

Name:

Date:

Period:

## STUFF YOU MUST KNOW – Precalculus

<p><b>Memory Exponents</b></p> $1^2 =$ $2^2 =$ $3^2 =$ $4^2 =$ $5^2 =$ $6^2 =$ $7^2 =$ $8^2 =$ $9^2 =$ $10^2 =$ $11^2 =$ $12^2 =$ $13^2 =$ $14^2 =$ $15^2 =$ $16^2 =$ $17^2 =$ $18^2 =$ $19^2 =$ $20^2 =$	<p><b>UNIT CIRCLE</b>  <b>**memorize ALL of it**</b></p> <p><b>Trig Identities</b></p> $\sin x =$ $\csc x =$ $\cos x =$ $\sec x =$ $\tan x =$ $\cot x =$	<p><b>Parent Functions</b></p> $y = \#$ $y = x$ $y = x^2$ $y = x^3$ $y = \sqrt{x}$ $y =  x $ $y = \sqrt[3]{x}$ $y = b^x$ $y = \ln x$ $y = \frac{1}{x}$ $y = \frac{1}{x^2}$ $y = \ x\ $ $y = \sin x$ $y = \cos x$ $y = \tan x$
<p><b>Transformations- Oven In House</b>  <b><math>y = a f(bx + c) + d</math></b></p> $y = f(x)$ $y = f(x) - d$ $y = f(x - c)$ $y = -f(x)$ $y = f(-x)$ $y = a f(x)$ $y = f(bx)$ $y =  f(x) $ $y = f( x )$ $y = f^{-1}(x)$	<p>Quotient Identities</p> $\tan x =$ $\cot x =$	<p><math>y = \sqrt{x}</math>  <math>y =  x </math>  <math>y = \sqrt[3]{x}</math>  <math>y = b^x</math>  <math>y = \ln x</math>  <math>y = \frac{1}{x}</math>  <math>y = \frac{1}{x^2}</math>  <math>y = \ x\ </math>  <math>y = \sin x</math>  <math>y = \cos x</math>  <math>y = \tan x</math></p>
<p><b>Vectors</b>  magnitude</p> <p>direction angle <math>\theta</math></p> <p>component form</p>	<p>Pythagorean Identities</p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol> <p><b>Triangles</b></p> <p>Law of Sines</p> <p>Law of Cosines</p> <p><b>Polar Equations</b></p> $x =$ $y =$ $\tan \theta =$ $x^2 + y^2 =$	<p><b>Distance Formula</b></p> <p><b>Point-Slope Form</b></p> <p><b>Slope-Intercept Form</b></p>
	<p><b>Keep/Change/Flip</b></p> $\frac{a}{b} =$ $\frac{b}{c} =$ $\frac{c}{d} =$	

<p><b>Exponents &amp; Radicals</b>  <math>a^0 =</math>  <math>(ab)^n =</math>  <math>a^x a^y =</math>  <math>\sqrt{a} =</math>  <math>\frac{a^x}{a^y} =</math>  <math>\sqrt[n]{a} =</math>  <math>\left(\frac{a}{b}\right)^n =</math>  <math>\sqrt[n]{a^m} =</math>  <math>a^{-x} =</math>  <math>\sqrt[n]{ab} =</math>  <math>(a^x)^y =</math>  <math>\sqrt[n]{\frac{a}{b}} =</math></p> <p><b>Sinusoidal Functions</b>  <math>f(x) = a \sin b(x - c) + d</math>  <math>a =</math>  <math>c =</math>  <math>d =</math>  <math>\text{period} =</math></p> <p><b>Projectile Motion</b>  <math>x =</math>  <math>y =</math>  <math>y =</math></p>	<p><b>Logarithm Rules</b>  Change from log to exponential  <math>\log_b y = x</math>  <math>\ln y = x</math>  <math>\log y = x</math>  Change from exponential to log  <math>b^x = y</math>  More log rules  <math>\log_a a =</math>  <math>\log_a 1 =</math>  <math>\log_a a^n =</math>  Product Rule:  <math>\log_b (mn) =</math>  Quotient Rule:  <math>\log_b \left(\frac{m}{n}\right) =</math>  Power Rule:  <math>\log_b m^n =</math></p> <p><b>Rationals</b>  Horizontal Asymptotes (HA)  1.  2.  3.  Vertical Asymptotes (VA)  x-intercepts (zeros, roots, solutions)  y-intercepts  point of discontinuity (hole)  cross HA</p>	<p><b>Conics</b>  Circumference of Circle  Area of Circle  Circle  Parabola (Standard Form)  Parabola (Vertical)  Parabola (Horizontal)  Ellipse (Vertical)  Ellipse (Horizontal)  Hyperbola (Vertical)  Hyperbola (Horizontal)  <b>General Form of Conic</b>  <b>Arithmetic Sequences &amp; Series</b>  <b>Geometric Sequences &amp; Series</b>  <b>Infinite Geometric Series</b></p>
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# June

2026

Students transitioning from Precalculus to AP Calculus AB will need to complete the following assignments prior to the first day of the 2026-27 school year: This will be a TEST GRADE. Review of Precalculus skills: Grades will be issued for the following assignments when school starts. Your goal should be to reach a Smart Score of 85 or higher on each IXL topic. IXL's should be completed during the months indicated. Put your grade and have a parent Initial in the box.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8 A.3 (Evaluate functions)	9	10 A.7 (Add, subtract, multiply, and divide functions)	11	12 Unit Circle Practice on your own	13
14	15	16 D.6 (Solve a quadratic equation by factoring)	17	18 Memory Card Practice Pre Cal	19	20
21	22 R.1 (Convert between radians and degrees)	23	24 R.4 (Coterminal and reference angles)	25	26 Unit Circle Practice on your own	27
28	29	30 U.4 (Find properties of circles)				

# July

Students transitioning from Precalculus to AP Calculus AB will need to complete the following assignments prior to the first day of the 2026-27 school year: This will be a TEST GRADE. Review of Precalculus skills: Grades will be issued for the following assignments when school starts. Your goal should be to reach a Smart Score of 85 or higher on each IXL topic. IXL's should be completed during the months indicated. Put your grade and have a parent Initial in the box.

# 2026

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2 Memory Card Practice Pre Cal	3	4
5	6 Unit Circle Practice on your own	7	8 R.11 (Solve trigonometric equations)	9	10 C.5 (Transformations of functions)	11
12	13	14 Memory Card Practice Pre Cal	15	16 U.5 (Write equations of circles in standard form)	17	18
19	20 M.5 (Solve equations with rational exponents)	21	22 Find derivatives of polynomials TL2	23	24 Memory Card Practice Pre Cal	25
26	27	28 Find derivatives of inverse trigonometric functions. E7Q	29	30 Find derivatives using implicit differentiation HVQ	31	