

The daily structure stays consistent: **5–7 min Do Now** → **10–15 min direct instruction/notes** → **10–15 min guided examples** → **15–20 min independent/IXL practice** → **3–5 min exit ticket**.

Precalculus 2026–27

Day-by-Day Pacing Guide

Foundations — Algebra 2 & Functions Review

August 21–September 4

Date	Lesson / Focus
Fri 8/21	Diagnostic — Algebra 2/functions prerequisite assessment
Mon 8/24	Function notation: $f(x)$, input/output
Tue 8/25	Domain & range
Wed 8/26	Evaluating functions
Thu 8/27	Solving equations & inequalities review
Fri 8/28	Linear functions, slope & rate of change
Mon 8/31	Quadratic functions review
Tue 9/1	Exponential functions & exponent rules
Wed 9/2	Polynomial/rational expression review
Thu 9/3	Graphing & interpreting functions
Fri 9/4	Foundations assessment + corrections

Mon 9/7 — Labor Day / No School

UNIT 1 — Functions & Function Transformations

September 8–October 2

Week 1

Date	Lesson
Tue 9/8	What is a function? Representations of functions
Wed 9/9	Function notation
Thu 9/10	Domain & range algebraically
Fri 9/11	Domain & range from graphs

Week 2

Date	Lesson
Mon 9/14	Average rate of change
Tue 9/15	Increasing/decreasing intervals
Wed 9/16	Relative maxima & minima
Thu 9/17	Interpreting graphs in context
Fri 9/18	Functions Quiz

Week 3

Date	Lesson
Mon 9/21	Parent functions
Tue 9/22	Vertical translations
Wed 9/23	Horizontal translations
Thu 9/24	Reflections

Fri 9/25 Vertical stretches &
 compressions

Week 4

Date	Lesson
Mon 9/28	Horizontal stretches/compressions
Tue 9/29	Combining transformations
Wed 9/30	Write equations from transformed graphs
Thu 10/1	Unit review
Fri 10/2	Unit 1 Assessment

UNIT 2 — Function Operations, Composition & Inverses

October 5–October 23

I would give **composition of functions** its own block rather than squeezing it into a single lesson.

Date	Lesson
Mon 10/5	Adding & subtracting functions
Tue 10/6	Multiplying functions
Wed 10/7	Dividing functions & domain restrictions
Thu 10/8	Introduction to composite functions
Fri 10/9	Evaluate $f(g(x))f(g(x))$ numerically
Mon 10/12	Evaluate compositions algebraically
Tue 10/13	$f(g(x))f(g(x))$ vs. $g(f(x))g(f(x))$

Wed 10/14	Composition from tables & graphs
Thu 10/15	Decomposing composite functions
Fri 10/16	Composition Quiz
Mon 10/19	Introduction to inverse functions
Tue 10/20	Find inverses algebraically
Wed 10/21	Verify inverses using composition
Thu 10/22	Review: operations/composition/inverses
Fri 10/23	Unit 2 Assessment

UNIT 3 — Polynomial & Rational Functions

October 26–December 11

Polynomial Functions

Date	Lesson
Mon 10/26	Polynomial functions: degree & leading coefficient
Tue 10/27	End behavior
Wed 10/28	Zeros & x-intercepts
Thu 10/29	Multiplicity
Fri 10/30	Sketching polynomial graphs
Mon 11/2	Write polynomial functions from zeros
Tue 11/3	Polynomial division
Wed 11/4	Synthetic division
Thu 11/5	Remainder theorem
Fri 11/6	Factor theorem

Mon 11/9	Fundamental Theorem of Algebra
Tue 11/10	Complex zeros
Wed 11/11	Veterans Day / potential closure
Thu 11/12	Polynomial modeling
Fri 11/13	Polynomial Quiz

Rational Functions

Date	Lesson
Mon 11/16	Introduction to rational functions
Tue 11/17	Domain restrictions
Wed 11/18	Vertical asymptotes
Thu 11/19	Horizontal asymptotes
Fri 11/20	Holes & discontinuities

Thanksgiving Break

Use your school's actual calendar.

Date	Lesson
Mon 11/30	Graph rational functions
Tue 12/1	Oblique/slant asymptotes
Wed 12/2	Solve rational equations
Thu 12/3	Rational inequalities
Fri 12/4	Rational Functions Quiz
Mon 12/7	Polynomial/rational applications
Tue 12/8	Mixed graph analysis
Wed 12/9	Reteach/corrections
Thu 12/10	Unit review

UNIT 4 — Exponential & Logarithmic Functions

December 14–January 29

Before Winter Break

Date	Lesson
Mon 12/14	Exponential functions review
Tue 12/15	Growth & decay
Wed 12/16	Exponential models
Thu 12/17	Compound interest
Fri 12/18	Continuous growth & e

January

Date	Lesson
Mon 1/4	Exponential functions as inverses of logarithms
Tue 1/5	Definition of logarithm
Wed 1/6	Convert exponential $\leftrightarrow$ logarithmic form
Thu 1/7	Evaluate logarithms
Fri 1/8	Graph logarithmic functions
Mon 1/11	Product property of logarithms
Tue 1/12	Quotient property
Wed 1/13	Power property

Thu 1/14	Expand logarithms
Fri 1/15	Condense logarithms
Mon 1/18	MLK Day / No School
Tue 1/19	Solve exponential equations
Wed 1/20	Solve exponential equations with logarithms
Thu 1/21	Solve logarithmic equations
Fri 1/22	Exponential/Log Quiz
Mon 1/25	Exponential/log modeling
Tue 1/26	Compound/continuous interest applications
Wed 1/27	Mixed applications
Thu 1/28	Unit review
Fri 1/29	Unit 4 Assessment

UNIT 5 — Trigonometry & the Unit Circle

February 1–March 5

I would give this substantial time. The unit circle becomes foundational for almost everything that follows.

Date	Lesson
Mon 2/1	Angle measurement
Tue 2/2	Degrees & radians
Wed 2/3	Convert degrees $\rightarrow$ radians
Thu 2/4	Convert radians $\rightarrow$ degrees
Fri 2/5	Coterminal angles
Mon 2/8	Unit circle introduction

Tue 2/9	Quadrant I unit-circle values
Wed 2/10	Reference angles
Thu 2/11	Complete unit circle
Fri 2/12	Unit Circle Quiz 1
Mon 2/15	Presidents' Day / No School
Tue 2/16	Define sine & cosine from unit circle
Wed 2/17	Tangent
Thu 2/18	Secant, cosecant & cotangent
Fri 2/19	Six trig functions
Mon 2/22	Evaluate trig functions at special angles
Tue 2/23	Trig functions for any angle
Wed 2/24	Reference-angle practice
Thu 2/25	Signs by quadrant
Fri 2/26	Unit Circle Quiz 2
Mon 3/1	Fundamental/Pythagorean identities
Tue 3/2	Find missing trig values
Wed 3/3	Unit-circle applications
Thu 3/4	Review
Fri 3/5	Unit 5 Assessment

UNIT 6 — Graphs of Trigonometric Functions

March 8–April 2

Date	Lesson
Mon 3/8	Graph $y = \sin x$
Tue 3/9	Graph $y = \cos x$
Wed 3/10	Amplitude
Thu 3/11	Period
Fri 3/12	Midline & vertical shifts
Mon 3/15	Horizontal/phase shifts
Tue 3/16	$y = a \sin(bx - c) + d$
Wed 3/17	$y = a \cos(bx - c) + d$
Thu 3/18	Write sine/cosine equations from graphs
Fri 3/19	Sine/Cosine Graphing Quiz
Mon 3/22	Graph tangent
Tue 3/23	Transform tangent functions
Wed 3/24	Secant & cosecant graphs
Thu 3/25	Periodic modeling
Fri 3/26	Sinusoidal applications
Mon 3/29	Ferris wheel/periodic modeling problems
Tue 3/30	Write models from data/context
Wed 3/31	Mixed trig graph practice
Thu 4/1	Unit review
Fri 4/2	Unit 6 Assessment

UNIT 7 — Trigonometric Identities & Equations

April 5–April 30

Date	Lesson
Mon 4/5	Fundamental identities
Tue 4/6	Reciprocal identities
Wed 4/7	Quotient identities
Thu 4/8	Pythagorean identities
Fri 4/9	Simplifying trig expressions
Mon 4/12	Verify identities
Tue 4/13	Identity practice
Wed 4/14	Sum identities
Thu 4/15	Difference identities
Fri 4/16	Identities Quiz
Mon 4/19	Double-angle identities
Tue 4/20	Introduction to trig equations
Wed 4/21	Solve basic sine equations
Thu 4/22	Solve cosine equations
Fri 4/23	Solve tangent equations
Mon 4/26	Multiple solutions on intervals
Tue 4/27	Equations requiring factoring
Wed 4/28	Mixed trig equations
Thu 4/29	Unit review
Fri 4/30	Unit 7 Assessment

UNIT 8 — Applications of Trigonometry

May 3–May 14

Date	Lesson
Mon 5/3	Right-triangle applications
Tue 5/4	Angles of elevation/depression
Wed 5/5	Law of Sines
Thu 5/6	Law of Sines applications
Fri 5/7	Ambiguous case SSA
Mon 5/10	Law of Cosines
Tue 5/11	Law of Cosines applications
Wed 5/12	Area of oblique triangles
Thu 5/13	Review
Fri 5/14	Unit 8 Assessment

UNIT 9 — Conics & Precalculus Extensions

May 17–May 28

Date	Lesson
Mon 5/17	Introduction to conic sections
Tue 5/18	Circles
Wed 5/19	Parabolas
Thu 5/20	Ellipses
Fri 5/21	Hyperbolas
Mon 5/24	Identify conics from equations

Tue 5/25	Graph conic sections
Wed 5/26	Conics applications
Thu 5/27	Cumulative review
Fri 5/28	Unit 9 Assessment / Precalculus Review

Final Review

June 1–4

Monday 5/31 — Memorial Day

Date	Focus
Tue 6/1	Review 1: Functions, composition, inverses, polynomials & rational functions
Wed 6/2	Review 2: Exponential & logarithmic functions
Thu 6/3	Review 3: Unit circle, trig graphs, identities & equations
Fri 6/4	Cumulative Precalculus Final

One change I would make compared with the Algebra 2 course

For Precalculus, I would put considerably more emphasis on **function fluency and mathematical connections**. Students should repeatedly move among an equation, graph, table and verbal description rather than simply learning procedures.

For example, with composite functions, I would have students work with all four forms:

$$f(g(3)), f(g(x)), (f \circ g)(x) \text{ and } f(g(3)), f(g(x)), (f \circ g)(x)$$

and compositions represented through **tables and graphs**, not only algebraic formulas.

Likewise, once trigonometry starts, I'd include **5-minute unit-circle retrieval practice almost every day**. By March, students should be able to reproduce the unit circle rather than relearning it each lesson.

This also pairs very naturally with your **Algebra 2 pacing guide**, so the two courses can run with essentially the same classroom structure: **Do Now** → **mini-lesson** → **examples** → **IXL/practice** → **exit ticket**, making preparation much more manageable across both classes.