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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 1 – Values of Trigonometric Functions**
Students determine the relationships among the unit circle, trigonometric functions, and trigonometric values when given measurements in degrees, minutes, and seconds or radians based on the unit circle.

## 2021 August

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
| | **Enrichment Opportunities** | | | | | |
| 08 | 09 | 10 | 11 | 12 | 13 | 14 |
| | **Enrichment Opportunities** | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | **Teacher Service Days (no students)** | | **Teacher Prep Day (no students)** | **Teacher Service Days (no students)** | | |
| 22 | 23   | 24 **Unit 1** (8 45-min. class periods) | 25 | 26 | 27 | 28 |
| 29 | 30 **Unit 1** (8 45-min. class periods) | 31 | 01 | 02 | 03 | 04 |
| 05 | 06 | **Notes:** Aug. 16-20 - Teacher Service Days (no students) | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 2 – Graphs and Properties of Trigonometric Functions**
Students convert degrees to radians and use them to derive the six trigonometric functions, their graphs, and transformations.

**Unit 3 – Inverse of the Trigonometric Functions**
Students graphically, tabularly, and algebraically analyze the inverse of the trigonometric functions.

## 2021 September

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 29 | 30 | 31 | 01<br>**Unit 1**<br>(8 45-min. class periods) | 02 | 03<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 04 |
| 05 | 06<br>**Labor Day** | 07<br>**Unit 2**<br>(10 45-min. class periods) | 08 | 09 | 10 | 11 |
| 12 | 13<br>**Unit 2**<br>(10 45-min. class periods) | 14 | 15 | 16<br>**Fall Holiday** | 17<br>**Teacher Service Day (no students)** | 18 |
| 19 | 20<br>**Unit 2**<br>(10 45-min. class periods) | 21 | 22 | 23<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 24 | 25 |
| 26 | 27<br>**Unit 3**<br>(4 45-min. class periods) | 28 | 29 | 30 | 01 | 02 |
| 03 | 04 | **Notes:**<br>Sept. 6 - Labor Day<br>Sept. 16 - Fall Holiday<br>Sept. 17 - Teacher Service Day (no students) | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 4 – Trigonometric Identities**
Students analyze and transform trigonometric functions and identities.

**Unit 5 – Trigonometric Equations**
Students analyze and solve trigonometric equations.

## 2021 October

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 26 | 27 | 28 | 29 | 30 | 01<br>• Extend<br>• Review<br>• Assess<br>• Reteach | 02<br>**END OF CYCLE 1** |
| 03 | 04<br>**Teacher Service Day (no students)**<br>**Unit 4**<br>(8 45-min. class periods) | 05<br>**Unit 4**<br>(8 45-min. class periods) | 06 | 07 | 08 | 09 |
| 10 | 11<br>**Unit 4**<br>(8 45-min. class periods) | 12 | 13 | 14 | 15<br>• Extend<br>• Review<br>• Assess<br>• Reteach | 16 |
| 17 | 18<br>**Unit 5**<br>(9 45-min. class periods) | 19 | 20 | 21 | 22 | 23 |
| 24 | 25<br>**Unit 5**<br>(9 45-min. class periods) | 26 | 27 | 28 | 29<br>• Extend<br>• Review<br>• Assess<br>• Reteach | 30 |
| 31 | 01 | **Notes:**<br>Oct. 4 - Teacher Service Day (no students) | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 6 – Applications of Trigonometric Functions**
Students apply and analyze trigonometric functions to solve real-world problems.

**Unit 7 – Composition of Functions and Inverses**
Students analyze the composition of functions, the inverse of a function, and the importance of the relationship between their respective domains and ranges.

**Unit 8 – Attributes of Piecewise and Step Functions**
Students analyze attributes of piecewise and step functions in relation to real-world situations.

## 2021 November

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 31 | 01<br>**Unit 6**<br>(7 45-min. class periods) | 02 | 03 | 04 | 05<br>• Extend<br>• Review<br>• Assess<br>• Reteach | 06 |
| 07 | 08<br>**Unit 6**<br>(7 45-min. class periods) | 09 | 10 | 11<br>• Extend<br>• Review<br>• Assess<br>• Reteach | 12 | 13<br>**END OF CYCLE 2** |
| 14 | 15<br>**Unit 7**<br>(4 45-min. class periods) | 16 | 17 | 18 | 19<br>• Extend<br>• Review<br>• Assess<br>• Reteach | 20 |
| 21 | 22 | 23 | 24<br>**Thanksgiving** | 25 | 26 | 27 |
| 28 | 29<br>**Unit 8**<br>(8 45-min. class periods) | 30 | 01 | 02 | 03 | 04 |
| 05 | 06 | **Notes:**<br>Nov. 22-26 - Thanksgiving Break | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 8 – Attributes of Piecewise and Step Functions**
Students analyze attributes of piecewise and step functions in relation to real-world situations.

**Unit 9 – Polynomial and Power Functions in the Real World**
Students analyze polynomial and power functions, their transformations using graphs, tables, and algebraic properties, and real-world situations.

## 2021 December

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 28 | 29 | 30 | 01<br>**Unit 8**<br>(8 45-min. class periods) | 02 | 03 | 04 |
| 05 | 06<br>**Unit 8**<br>(8 45-min. class periods) | 07 | 08 | 09<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 10 | 11 |
| 12 | 13<br>**Unit 9**<br>(8 45-min. class periods) | 14 | 15 | 16 | 17<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 18 |
| 19 | 20<br>**Enrichment Opportunities** | 21 | 22<br>**Winter Break** | 23 | 24 | 25 |
| 26 | 27<br>**Winter Break** | 28 | 29 | 30 | 31 | 01 |
| 02 | 03 | **Notes:**<br>Dec. 20-31 - Winter Break | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 9 – Polynomial and Power Functions in the Real World**
Students analyze polynomial and power functions, their transformations using graphs, tables, and algebraic properties, and real-world situations.

**Unit 10 – Rational Functions**
Students analyze characteristics of rational functions through graphs, tables, and algebraic methods in real-world situations.

## 2022 January

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 26 | 27 | 28 | 29 | 30 | 31 | 01 |
| 02 | 03<br>**Unit 9**<br>(8 45-min. class periods)<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 04<br> | 05<br> | 06<br> | 07<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach**<br> | 08<br>**END OF CYCLE 3** |
| 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17<br>**Martin Luther King, Jr. Day** | 18<br>**Teacher Prep Day (no students)** | 19<br>**Unit 10**<br>(8 45-min. class periods) | 20 | 21 | 22 |
| 23 | 24<br>**Unit 10**<br>(8 45-min. class periods) | 25 | 26 | 27 | 28 | 29 |
| 30 | 31<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | **Notes:**<br>Jan. 17 - Martin Luther King, Jr. Day<br>Jan. 18 - Teacher Preparation Day (no students) | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 11 – Exponential and Logarithmic Functions**
Students analyze attributes of exponential and logarithmic functions and equations to solve real-world problems.

**Unit 12 – Arithmetic and Geometric Sequences and Series**
Students apply and analyze real-world problems using geometric and arithmetic sequences and series.

**Unit 13 – Binomial Theorem**
Students use mathematical induction to prove formulas such as the Binomial Theorem.

## 2022 February

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 30 | 31 | 01<br>**Unit 11**<br>(8 45-min. class periods) | 02 | 03 | 04<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 05 |
| 06 | 07<br>**Unit 11**<br>(8 45-min. class periods)<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 08<br>**Unit 12**<br>(6 45-min. class periods) | 09 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21<br>**Teacher Service Day (no students)** | 22<br>**Unit 12**<br>(6 45-min. class periods) | 23 | 24<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 25 | 26<br>**END OF CYCLE 4** |
| 27 | 28<br>**Unit 13**<br>(4 45-min. class periods) | 01 | 02 | 03 | 04 | 05 |
| 06 | 07 | **Notes:**<br>Feb. 21 - Teacher Service Day (no students) | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 13 – Binomial Theorem**
Students use mathematical induction to prove formulas such as the Binomial Theorem.

**Unit 14 – Conic Sections and Attributes of Ellipses and Hyperbola**
Students explore and apply properties of conic sections with specific concentration on the properties of an ellipse and hyperbola to write their equations.

**Unit 15 – Parametric Equations and Plane Curves**
Students analyze parametric equations in real-world situations.

## 2022 March

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 27 | 28 | 01<br>**Unit 13**<br>(4 45-min. class periods) | 02 | 03 | 04<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 05 |
| 06 | 07<br>**Unit 14**<br>(10 45-min. class periods) | 08 | 09 | 10 | 11<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 12 |
| 13 | 14<br>**Enrichment Opportunities** | 15 | 16 | 17<br>**Spring Break** | 18 | 19 |
| 20 | 21<br>**Unit 14**<br>(10 45-min. class periods) | 22 | 23 | 24 | 25 | 26 |
| 27 | 28<br>**Chávez / Huerta Day** | 29<br>**Unit 14**<br>(10 45-min. class periods) | 30<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 31<br>**Unit 15**<br>(6 45-min. class periods) | 01 | 02 |
| 03 | 04 | **Notes:**<br>Mar. 14-18 - Spring Break<br>Mar. 28 - César Chávez/Dolores Huerta Day | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 15 – Parametric Equations and Plane Curves**
Students analyze parametric equations in real-world situations.

**Unit 16 – Polar Coordinates, Equations, and Graphs**
Students explore the properties and relationships of the polar coordinate system and the Cartesian coordinate system. They represent complex numbers in polar form and use polar coordinates to graph and apply functions in real-world situations.

## 2022 April

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 27 | 28 | 29 | 30 | 31 | 01<br>**Unit 15**<br>(6 45-min. class periods) | 02 |
| 03 | 04<br>**Unit 15**<br>(6 45-min. class periods)<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 05<br>**Unit 16**<br>(10 45-min. class periods) | 06 | 07<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 08<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 09 |
| 10 | 11 | 12 | 13 | 14 | 15<br>**Spring Holiday** | 16 |
| 17 | 18<br>**Unit 16**<br>(10 45-min. class periods) | 19 | 20 | 21 | 22<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 23<br>**END OF CYCLE 5** |
| 24 | 25<br>**Unit 16**<br>(10 45-min. class periods) | 26 | 27 | 28 | 29<br>• **Extend**<br>• **Review**<br>• **Assess**<br>• **Reteach** | 30 |
| 01 | 02 | **Notes:**<br>Apr. 15 - Spring Holiday | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

### Units of Instruction

**Unit 17 – Vectors**
Students explore two- and three-dimensional applications of vectors through dot products and cross products.

**Unit 18 – Bridge to Calculus**
Students are introduced to concept of limits and rate of change in data and real-world situations.

## 2022 May

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 01 | 02<br>**Unit 17**<br>(8 45-min. class periods) | 03 | 04 | 05 | 06<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 07 |
| 08 | 09<br>**Unit 17**<br>(8 45-min. class periods) | 10 | 11 | 12 | 13<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 14 |
| 15 | 16<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 17<br>**Unit 18**<br>(6 45-min. class periods) | 18 | 19 | 20 | 21 |
| 22 | 23<br>**Unit 18**<br>(6 45-min. class periods) | 24 | 25<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 26 | 27 | 28 |
| 29 | 30<br>**Memorial Day** | 31<br>**• Extend**<br>**• Review**<br>**• Assess**<br>**• Reteach** | 01 | 02 | 03 | 04 |
| 05 | 06 | **Notes:**<br>May 30 - Memorial Day | | | | |

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# Mathematics – Precalculus

## 2021-2022 Pacing Calendar

**Units of Instruction**

## 2022 June

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 29 | 30 | 31 | 01<br>• Extend<br>• Review<br>• Assess<br>• Reteach | 02<br>FINAL EXAMS | 03<br>FINAL EXAMS | 04 |
| 05 | 06<br>FINAL EXAMS | 07<br>FINAL EXAMS | 08<br>Teacher Prep Day (no students)<br>END OF CYCLE 6 | 09 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 01 | 02 |
| 03 | 04 | | | | | |

**Notes:**
Jun. 8 - Teacher Preparation Day (no students)

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