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| Name:<br>Mrs. Woods |        | Grading Quarter:<br>2   | Week Beginning:<br>10/30/23  |
| School Year: 23-24  |        | Subject: Precalculus  |  |
| Monday              | Notes: | <p>Objective: Students will be able to show mastery of unit concepts on the unit test.</p> <p>Lesson Overview:<br/>Students will take the Unit 4 test.</p>  | <p>Academic Standards:<br/>P.F-TF.A.3 Use special triangles to determine geometrically the values of sine, cosine, tangent for <math>\pi/3</math>, <math>\pi/4</math> and <math>\pi/6</math>, and use the unit circle to express the values of sine, cosine, and tangent for <math>\pi-x</math>, <math>\pi+x</math>, and <math>2\pi-x</math> in terms of their values for <math>x</math>, where <math>x</math> is any real number.</p>   |
| Tuesday             | Notes: | <p>Objective: Students will be able to graph sin and cos functions.</p> <p>Lesson Overview:<br/>Notes – Graphs of sin and cos<br/>Draw parent functions by hand, first<br/>Then use Desmos to graph with technology<br/>Discuss domain, range, shifts, and stretches (amplitude and period)</p> | <p>Academic Standards:<br/>A2.F-BF.A.1 Write a function that describes a relationship between two quantities. Include problem-solving opportunities utilizing real-world context. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine function types using arithmetic operations and function composition.<br/>A2.F-BF.B.3 Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k \cdot f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specified values of <math>k</math> (both positive and negative); find the values of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graphs using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions.</p> |

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| Wednesday | Notes: | <p>Objective: Students will be able to graph tan functions.</p> <p>Lesson Overview:<br/>Notes – Graph of tan<br/>Draw parent functions by hand, first<br/>Then use Desmos to graph with technology<br/>Discuss domain, range, shifts, and stretches (amplitude and period)</p>  | <p>Academic Standards:</p> <p>A2.F-BF.A.1 Write a function that describes a relationship between two quantities. Include problem-solving opportunities utilizing real-world context. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine function types using arithmetic operations and function composition.</p> <p>A2.F-BF.B.3 Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k \cdot f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specified values of <math>k</math> (both positive and negative); find the values of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graphs using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions.</p> |
| Thursday  | Notes: | <p>Objective: Students will be able to graph reciprocal and inverse trig functions.</p> <p>Lesson Overview:<br/>Notes – Graphs of csc, sec, cot, and all inverse trig functions<br/>Draw parent functions by hand, first<br/>Then use Desmos to graph with technology<br/>Discuss domain, range, shifts, and stretches (amplitude and period)</p> | <p>Academic Standards:</p> <p>A2.F-BF.A.1 Write a function that describes a relationship between two quantities. Include problem-solving opportunities utilizing real-world context. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine function types using arithmetic operations and function composition.</p> <p>A2.F-BF.B.3 Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k \cdot f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specified values of <math>k</math> (both positive and negative); find the values of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graphs using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions.</p> |

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| Friday | Notes: | <p>Objective: Students will be able to manipulate graphs of trig functions.</p> <p>Lesson Overview:<br/>Desmos activity: Marbleslides</p> | <p>Academic Standards:</p> <p>A2.F-BF.A.1 Write a function that describes a relationship between two quantities. Include problem-solving opportunities utilizing real-world context. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine function types using arithmetic operations and function composition.</p> <p>A2.F-BF.B.3 Identify the effect on the graph of replacing <math>f(x)</math> by <math>f(x) + k</math>, <math>k \cdot f(x)</math>, <math>f(kx)</math>, and <math>f(x + k)</math> for specified values of <math>k</math> (both positive and negative); find the values of <math>k</math> given the graphs. Experiment with cases and illustrate an explanation of the effects on the graphs using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root, and piecewise-defined functions.</p> |
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