Precalculus worksheet cosecant and secant answer

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Understand how asymptote equations are found for secant and cosecant by finding when the function in the denominator is equal to 0. Graph secant and cosecant when provided with key features of the graph Quick Lesson Plan Students will use the sine curve to help with the shape of the cosecant curve. They should fill in the table to see where the vertical asymptotes are as well as key points and then use their knowledge of the curve. If they try to draw a "V" shape, have them estimate a few more points on the curve for a more exact shape. Consider pausing after questions 1 through 5 to make sure students have the correct shape before letting them try to draw the secant curve in number 7. Formalize Later The most important thing to take away from this lesson is that you can use the sine and cosine curves to help draw the cosecant and secant curves, respectively. Asymptotes occur where the reciprocal function equals 0, reciprocal trig functions intersect at y = 1 and -1, and have an indirect relationship everywhere else. Have them write asymptote equations for all possible asymptotes by using "n" since it is impossible to list them all. For the secant curve, students should be drawing two complete "U" shapes, so they need to go past to get all 3 positive asymptotes. In order to continue enjoying our site, we ask that you confirm your identity as a human. Thank you very much for your cooperation. In order to continue enjoying our site, we ask that you confirm your identity as a human. Thank you very much for your cooperation. In order to continue enjoying our site, we ask that you confirm your identity as a human. Thank you very much for your cooperation. In order to continue enjoying our site, we ask that you confirm your identity as a human. Thank you very much for your cooperation. for Grade 11 Math Worksheets Examples, solutions, videos, worksheets, and activities to help Algebra 2 students learn how to graph the secant and cosine graphs. Scroll down the page for more examples and solutions for the secant graphs. The following diagram shows the cosecant and sine graphs. Scroll down the page for more examples and solutions for the cosecant graphs of Cosecant and Secant How to Graph the Cosecant How to Graph the Cosecant and Secant How to Graph the Cosecant How Function Graphs Graphing the secant and cosecant functions. Graphing Secant, and Tangent on the graphing calculator TI84 in degrees and radians. Show Step-by-step Solutions Transforming Secant and Cosecant functions and plot them on the coordinate plane. Unlike the graphs of sine and cosine, secant and cosecant have vertical asymptotes whenever the cosine and sine equal zero, respectively. Graphing transformation is made easier by substituting theta for the quantity in parenthesis and solving for x. Also, notice that neither graph has x-intercepts. Describing and graphing a transformation of the cosecant function. Show Step-by-step Solutions How to Graph the secant function that has an amplitude and vertical Transformation? Show Step-by-step Solutions Try the given examples, or type in your own problem and check your answer with the step-by-step explanations. We welcome your feedback, comments and questions about this site or page. Please submit your feedback or enquiries via our Feedback page. Give the equation of the following graph. Possible Answers: Explanation: Looking at our graph, we can tell that the period is . Using the formula where is the coefficient of and is the period, we can calculate This eliminates one answer choice. We then retrun to our graph and see that the amplitude is 3. Remembering that the amplitude is the number in front of the function, we can eliminate two more choices. We then examine our graph and realize it contains the point. Plugging 0 into our two remaining choices, we can determine which one gives us 4 for a result. This is the graph of what function of x? Possible Answers: Correct answer: Explanation: In order to graph, recall that. First consider the graph. Now anywhere this graph crosses the x-axis a vertical asymptote will form for the graph of . Considering the general form of the cosecant transformation function will be equal to zero and the function will be undefined. At each maximum and minimum of , the graph of . Considering th D) correspond to? Possible Answers: A = Amplitude, D = Vertical Shift A = Vertical Shift Explanation: Since cosecant is a reciprocal of sine, it uses the same general formula of the sine function with the letters corresponding to the same transformations. Note that while A does correspond to amplitude, the cosecant function extends infinitely upwards and downwards so there is no amplitude for the graphs. Which of the following is the graph of? Possible Answers: Correct answer: Explanation: Knowing that the graph of is we can use the general form of the cosecant transformation equation, and apply these transformations. We can ignore because in this case and so our period is: Period = Pe graphs and so we do not have to worry about lengthening or shortening the period. and so we need to apply a phase shift of 1 unit. The application of these transformations leaves us with our graph of . Which of the following is the graph for? Possible Answers: Correct answer: Explanation: In order to understand the graph of secant, recall that. First consider the graph because the denominator of will be equal to zero and the function will be undefined. At each maximum and minimum of, the graph of will invert at that point. And then we are left with the graph. Possible Answers: Explanation: When looking at the graph of, it extends infinitely upwards and downwards from each local maximum and minimum. This will be true for all transformed secant graphs as well. Due to this, there is no amplitude for secant graphs. However, secant is the reciprocal of cosine graphs which do rely on amplitude for transformations. For this reason amplitude must be considered as a vertical shift. Which of the following is the graph of? Possible Answers: Correct answer: Explanation: Knowing that the general form of the graph is: We can use the general form of the cosecant transformations. because secant graphs extend infinitely upwards and downwards graph. So we will consider for cosine. We will shift our secant graph to invert at the maximums and minimums of the cosine graph. Next, we will factor in order to get our equation into the form. And so . We can now solve for our period, Period = Period = Period = Period = This shortens our original period of to . Now we must consider . This will give us a phase shift of units to the left. Since our period has also been shortened this does not change the graph visually. in this case so we do not need to consider a vertical shift. And we are left with the graph of . Elisa Certified Tutor Cedarville University, Bachelor in Arts, Mathematics Teacher Education. Anthony Certified Tutor University of Arizona, Bachelor of Science, Mathematics. University of Arizona, Masters in Education, David Certified Tutor Pratt Institute-Main, Bachelor in Arts, Computer Graphics. Rensselaer Polytechnic Institute-Main, Bachelor in Arts, Computer Graphics. Rensselaer Polytechnic Institute Foundation. David Certified Tutor Pratt Institute-Main, Bachelor in Arts, Computer Graphics. Rensselaer Polytechnic Institute Foundation. David Certified Tutor Pratt Institute F to improve our educational resources. 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