

Homework Assignment #3

Instructor: Joshua Miller

Course Policy: Read all the instructions below carefully before you start working on the assignment, and before you make a submission.

Problem 1: Find all the information pertaining to $\sigma(x) = 3 \sin(2x)$. Includes, amplitude, period, phase shift, zeroes, y-intercept, increasing/decreasing intervals, and include a graph of the "master tile."

Problem 2: Find all the information pertaining to $\sigma(x) = 3 \cos(3x - \pi/6)$. Includes, amplitude, period, phase shift, zeroes, y-intercept, increasing/decreasing intervals, and include a graph of the "master tile."

Problem 3: Find all solutions of the equation $\sin \theta = \frac{-1}{3}$ that lie in the interval $[-5, 5]$.

Problem 4: Find all solutions of the equation $\tan \theta = 2$ that lie in the interval $[-3, 4]$.

Problem 5: Find the exact values of $\cos(\arcsin(-1/3))$ and $\sec(\arctan(3))$.

Problem 6: Find the exact values of $\frac{6 - \tan \theta}{\tan \theta - 1} = 2 \tan \theta$.

Problem 7: Find the general solution of the equation $3 \cos^2 t + 7 \cos t - 6 = 0$.

Problem 8: Find the general solutions to the equation $3 \sec \theta + 3 \cos \theta + 10 = 0$.

Problem 9: Given the points $A(2, 1)$, $B(3, 5)$ and $C(-2, 0)$, find the angle $\angle ABC$.

Problem 10: Given the points $A(2, 1)$, $B(1, 1)$ and $C(-2, -1)$, find the area(ABC).