Name: _____ Date: _____

Learning Goal 5.1	Graphing primary trigonometric functions, including transformations and characteristics

Example Solve $4\cos^2 x = 3$ for $0° \leq x \leq 360°$.

a. Graphically (Desmos)

b. Algebraically

Example Find the general solution for $2\sin^2 x - \sin x = 1$, x is in radians.

a. Graphically (Desmos)

b. Algebraically

Example Solve $5\cos\frac{\pi}{3}x - 2 = 1$, over the set of real numbers.

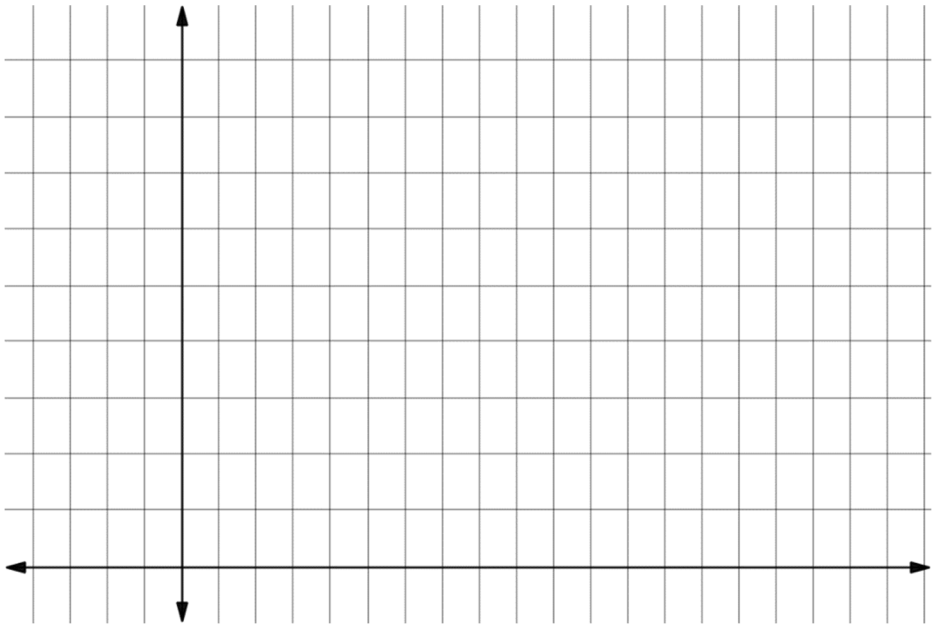
a. Graphically (Desmos)

b. Algebraically

Example Solve $7\sin(8x-4)-1=-4$, $0 \le x \le 0.75$ using an algebraic method.

Example In some Caribbean countries, the current makes 50 complete cycles every second and the voltage is modeled by $v = 170\sin 100\pi t$ where v is the voltage in volts and t is the time in seconds.

a. Graph the voltage function over two cycles. What do the scales on the axes represent?



What is the period of the current in these countries?