Chapter 5.3 – Solving Trigonometric Equations Day 1

Today we are going to solve the following trigonometric equations.

Example 1: Solve $2\sin x + 1 = 0$ on the interval $[0, 2\pi)$.

Example 2: Find all values of x that satisfy the equation $2\sin x + 1 = 0$ (i.e. find the general solution)

Example 3: Find all solutions of $\cos x + \sqrt{2} = -\cos x$ in the interval $[0, 2\pi)$.

Example 4: Solve for all x values that satisfy the equation $3\tan^2 x - 1 = 0$.

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Example 5: Find the general solution of $2\cos^2 A - 5\cos A + 2 = 0$

Example 6: Find the general solution of $2\sin^2 A + \cos A - 1 = 0$

Example 7: Solve $\dfrac{\cos^3 x}{\sin x} = \cot x$ on the interval $[0, 2\pi)$.