

Day 2 HW: Algebraic Solutions to Trig. Equations

Selected Solutions

- 3a. 4 solutions.
3b. 0° , 90° , 180° , or 270°
3c. Doubling the period doubles the number of solutions.
- 7a. 4 solutions
7b. We know that $\sin 30^\circ = \frac{1}{2}$. So, in the equation $\sin(2x) = \frac{1}{2}$, one possibility is that $2x = 30^\circ$ meaning that $x = 15^\circ$.
7c. 75°
7d. 180°
7e. The period is 180° . So, we add 180° to the first answer (15°) to get 195° .
7f. 255°
- 8b. 22.5° , 67.5° , 202.5° , or 247.5°
8d. 150° or 210°
8f. 300°