Lesson 6.4 Practice: Solving Basic Trigonometric Equations

School Launch · Trigonometry · Unit 6: Inverse Functions and Trigonometric Equations · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Solve on $[0, 2\pi)$: $\tan(x) = \frac{\sqrt{3}}{3}$. EASY

2. Solve on $[0, 2\pi)$: $\sin(x) = \frac{1}{2}$. EASY

3. Solve on $[0, 2\pi)$: $\cos(x) = -\frac{\sqrt{2}}{2}$. EASY

4. Solve on $[0, 2\pi)$: $\cos(x) = \frac{1}{2}$. MEDIUM

5. Solve on $[0, 2\pi)$: $\sin(x) = -\frac{\sqrt{2}}{2}$. MEDIUM

6. Solve on $[0, 2\pi)$: $\sin(x) = \frac{\sqrt{3}}{2}$. MEDIUM

7. Solve on $[0, 2\pi)$: $\tan(x) = 1$. MEDIUM

8. Solve on $[0, 2\pi)$: $\sin(2x) = -\frac{1}{2}$. HARD

9. Solve on $[0, 2\pi)$: $\tan(2x) = 1$. HARD

10. Solve on $[0, 2\pi)$: $\sin(2x) = -\frac{\sqrt{2}}{2}$. HARD