DO NOW

ALGEBRA 2 · 5 MINUTES · START RIGHT AWAY

Lesson 8-1d

Solve a Trigonometric Equation

Name _____ Date _____ Per _____

1 FLUENCY

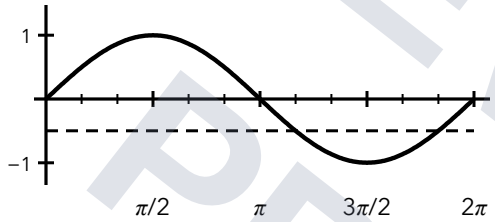
Solve $2\cos\theta + \sqrt{3} = 0$ for $0 \le \theta < 2\pi$.

$\cos\theta =$ ☐

$\theta =$ ☐ and ☐

2 VISUAL MODEL

The graph shows $y = \sin x$ and the dashed line $y = -\frac{1}{2}$. Mark the intersections and solve $\sin x = -\frac{1}{2}$ on $[0, 2\pi)$.



$x =$ ☐

$x =$ ☐

3 APPLICATION

A Ferris wheel seat's height is $h = 20 - 15\cos\theta$ (ft), where θ is the wheel's rotation. For which angles $0° \le \theta < 360°$ is the seat 27.5 ft high?

$\theta =$ ☐° and $\theta =$ ☐°

WORK

4 REASONING

Kim solved $\sin^2\theta = \sin\theta$ on $[0, 2\pi)$ by dividing both sides by $\sin\theta$, getting only $\theta = \frac{\pi}{2}$. Which solutions did she lose, and why?

Missing: $\theta =$ ☐ and $\theta =$ ☐

_____

_____

*We don't divide our effort, we **multiply** it!*

✎ Show your work ✓ Check your work ★ Try your best

Preview - the full worksheet and its answer key are at primeworksheet.com