DO NOW

ALGEBRA 2 · 5 MINUTES · START RIGHT AWAY

Lesson 8-3e

Model With Sum and Difference Formulas

Name _____ Date _____ Per _____

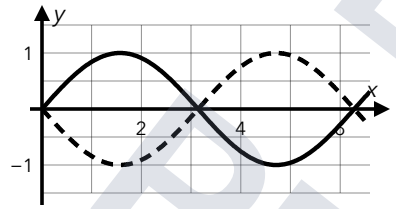
1 FLUENCY

Use the sum formula to write $\sin(x + 30°)$ in terms of $\sin x$ and $\cos x$.

$\sin(x + 30°) = \frac{\square}{\square} \sin x + \frac{\square}{\square} \cos x$

2 VISUAL MODEL

Sound waves $y = \sin x$ (solid) and $y = \sin(x + \pi)$ (dashed) play together. Use the sum formula.



$\sin(x + \pi) =$ _____

sum of waves = $\square$

3 APPLICATION

A Ferris wheel rider's height is $h = 20 + 18 \sin(\theta - 90°)$ feet. Use the difference formula to rewrite $\sin(\theta - 90°)$, then find h when $\theta = 60°$.

$\sin(\theta - 90°) =$ _____ $h =$ $\square$ ft

WORK

4 REASONING

Is $\sin(A + B) = \sin A + \sin B$ **always**, **sometimes**, or **never** true? Give an example that supports your choice.

always **sometimes** **never**

_____

_____

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

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

PREVIEW PREVIEW PREVIEW

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