

8.3 Evaluating Sinusoids Notes

EQ: How do we evaluate sinusoids without exact values?

Reminders...

How do I evaluate sinusoids with a calculator without graphing?

$$1. f(x) = 2 + 3 \cos \frac{\pi}{9}(x - 6)$$

A) $f(8)$
B) $f(x) = 1.3$

How do I find the second solution for sin and cos?

$$2. f(x) = 4 + 3 \sin \frac{\pi}{6}(x - 2)$$

Find the first 3 positive solutions where $f(x) = 6$

Steps:

1. Plug in $y = \#$
2. Isolate sin or cos
3. Inverse both sides
4. Find quadrants
5. Use calculator (in radians)
Q1: θ , QII: $\pi - \theta$, QIII: $\pi + \theta$, QIV: $-\theta$
6. Don't forget $+2\pi n$
7. Solve for x
8. Repeat steps 5-7 for 2nd solution

Summary: