

SINE AND COSINE GRAPHS
Additional Practice

Analysis

NAME Key
DATE _____ BLOCK _____

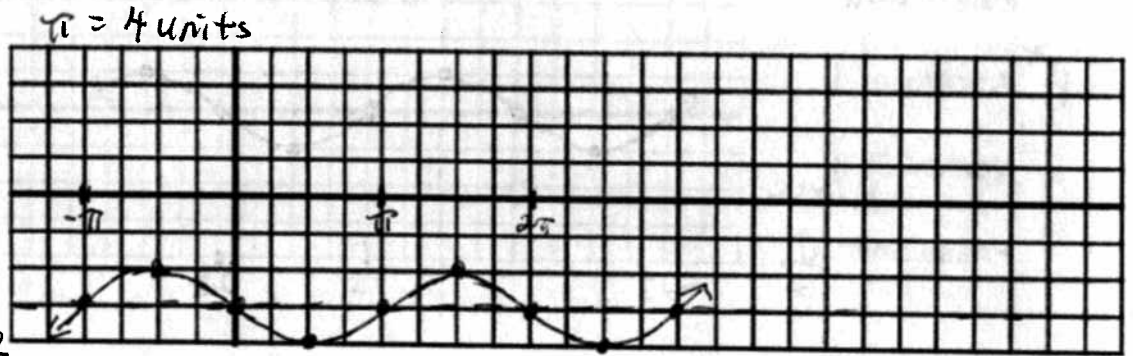
1. $y = -\sin x - 3$

Period: 2π

$A \ominus$ Amplitude: 1

Vertical Shift: D_n
3

Phase Shift: None



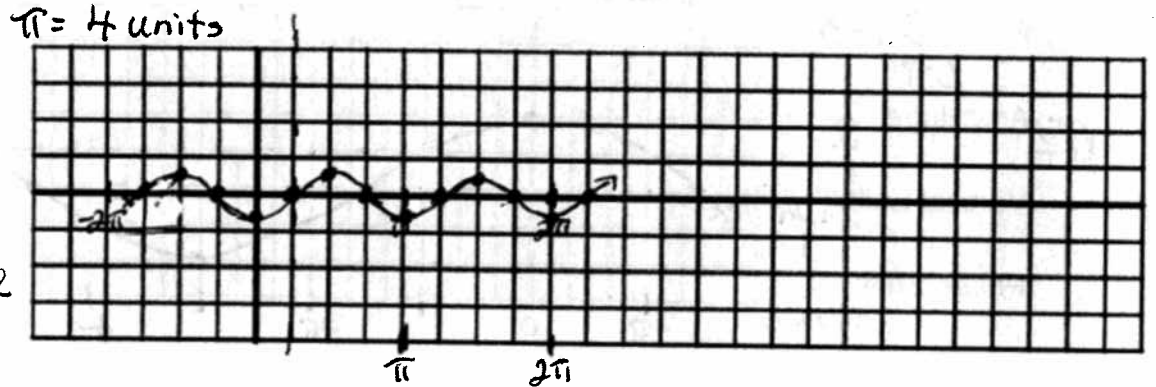
2. $y = \frac{1}{2} \sin 2(x - \frac{\pi}{4})$

Period: $\frac{2\pi}{2} = \pi$

$A \oplus$ Amplitude: $\frac{1}{2}$

Vertical Shift: none

Phase Shift: $\frac{\pi}{4}$



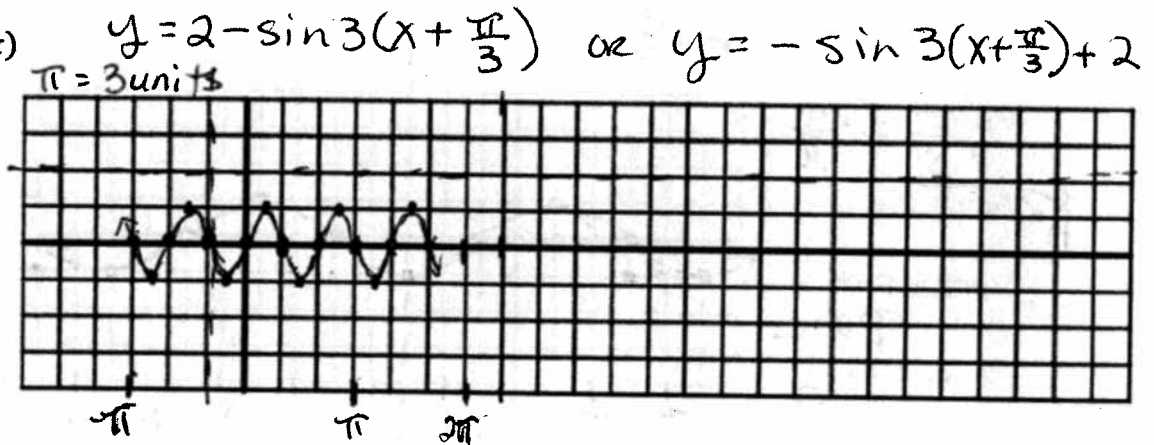
3. $y = 2 - \sin(3x + \pi)$

Period: $\frac{2\pi}{3}$

$A \ominus$ Amplitude: 1

Vertical Shift: up
2

Phase Shift: $-\frac{\pi}{3}$



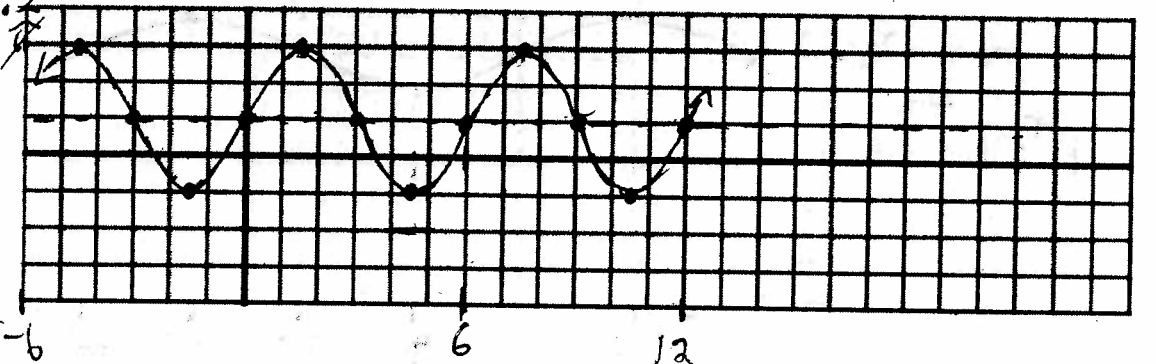
4. $y = 2 \sin \frac{\pi}{3}x + 1$

Period: $\frac{2\pi}{\frac{\pi}{3}} = 2\pi \cdot \frac{3}{\pi} = 6$

$A \oplus$ Amplitude: 2

Vertical Shift: up
1

Phase Shift: none



5. $y = \cos(x - \frac{\pi}{2})$

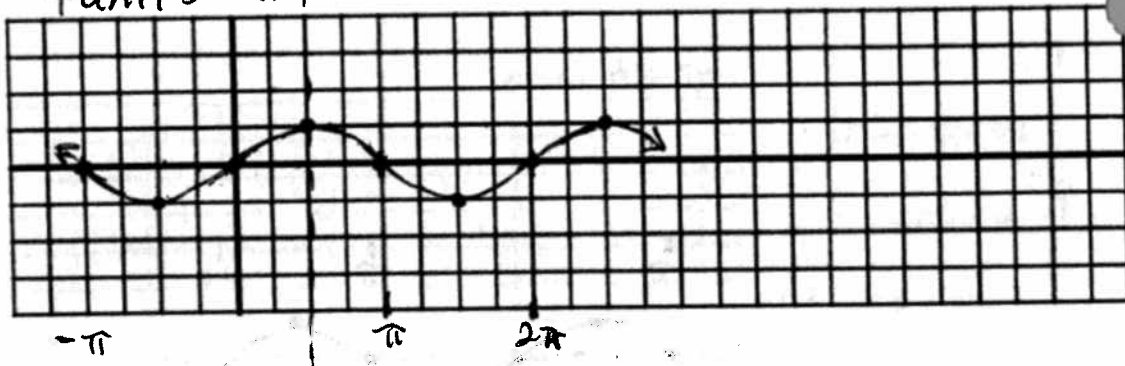
Period: 2π

A^+ Amplitude: 1

Vertical Shift: none

Phase Shift: $\frac{\pi}{2}$

4 units = π



6. $y = 2 \cos \frac{x}{3} - 1$

$B = \frac{1}{3}$

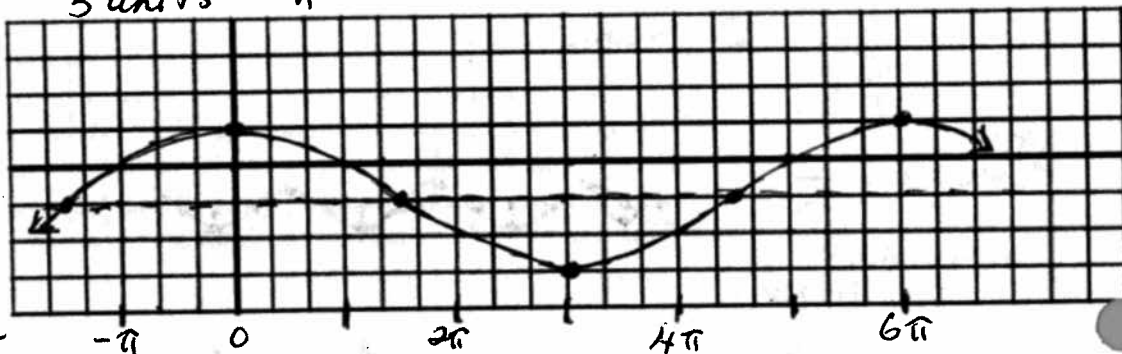
Period: $2\pi \cdot 3$
 6π

A^+ Amplitude: 2

Vertical Shift: D_n
1

Phase Shift: none

3 units = π



7. $y = -\cos \frac{\pi}{4}(x - 3)$

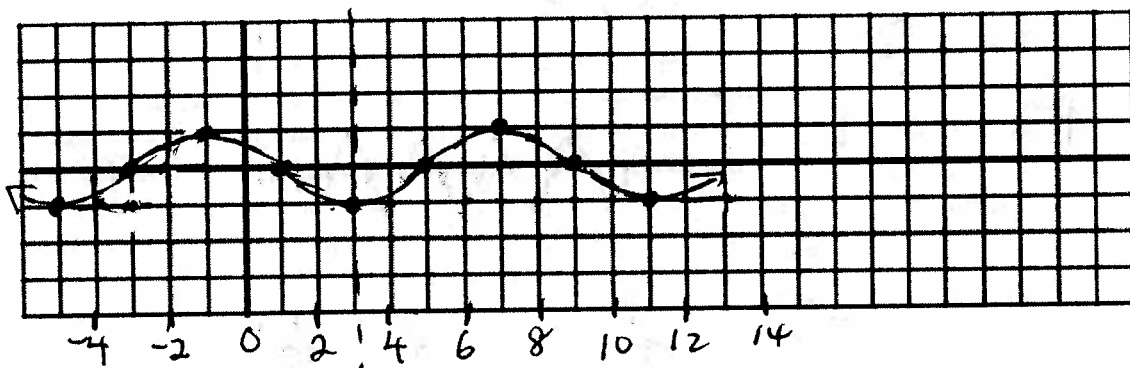
$B = \frac{\pi}{4}$

Period: $2\pi \cdot \frac{4}{\pi}$
 8

A^- Amplitude: 1

Vertical Shift: Done

Phase Shift: 3



8. $y = \cos(\frac{x}{2} + \frac{\pi}{2}) + 3$

$y = \cos \frac{1}{2}(x + \frac{\pi}{2}) + 3 \rightarrow y = \cos \frac{1}{2}(x + \pi) + 3$

Period: $2\pi \cdot 2$
 4π

A^+ Amplitude: 1

Vertical Shift: up
3

Phase Shift: $-\pi$

