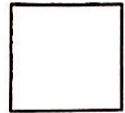


Name: _____

Unit 5: Trigonometric Functions



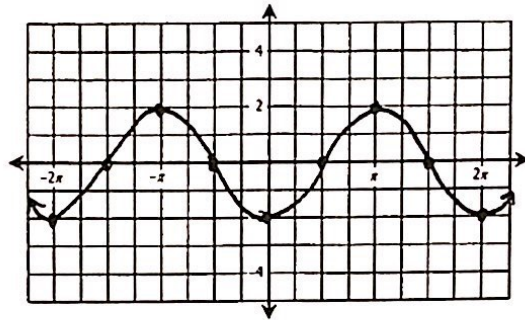
Date: _____ Per: _____

Homework 11: Translating Trigonometric Functions

**** This is a 2-page document! ****

Directions:

1. $f(x) = 2 \cdot \cos(x + \pi)$



Amplitude: 2

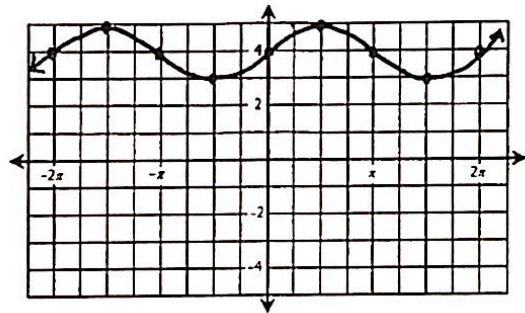
Period: 2π

Phase Shift: Left π

Vertical Shift: None

Midline: $y = 0$

2. $f(x) = \sin x + 4$



Amplitude: 1

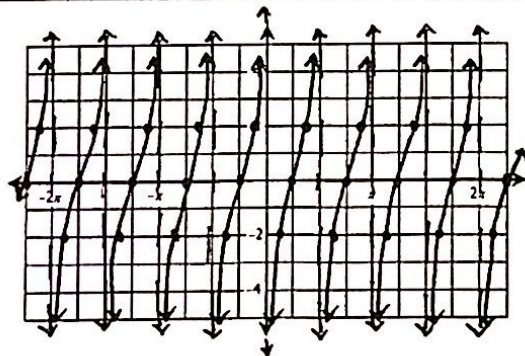
Period: 2π

Phase Shift: None

Vertical Shift: Up 4

Midline: $y = 4$

3. $f(x) = 2 \cdot \tan 2\left(x - \frac{3\pi}{4}\right)$



Amplitude: undef

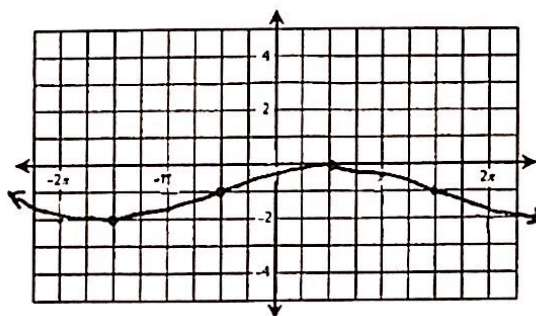
Period: $\frac{\pi}{2}$

Phase Shift: Right $\frac{3\pi}{4}$

Vertical Shift: None

Midline: $y = 0$

4. $f(x) = \cos \frac{1}{2}\left(x - \frac{\pi}{2}\right) - 1$



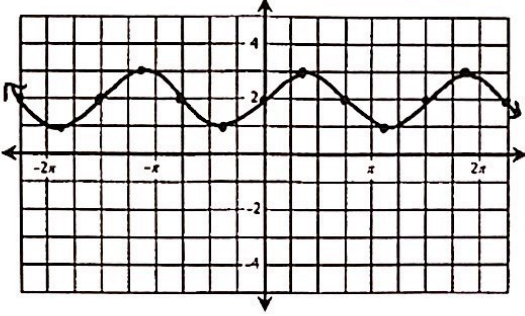
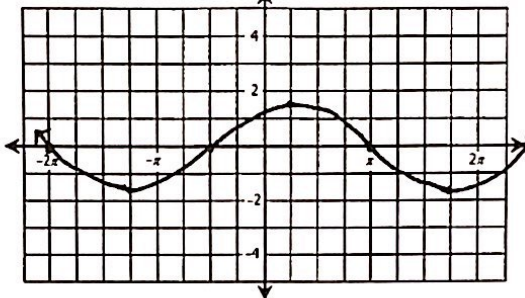
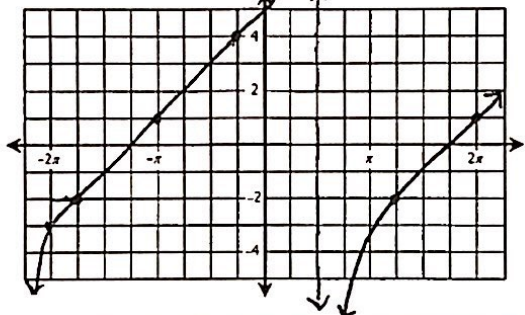
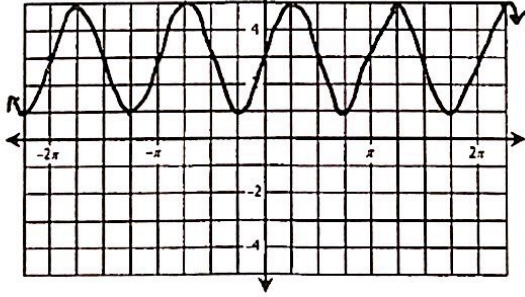
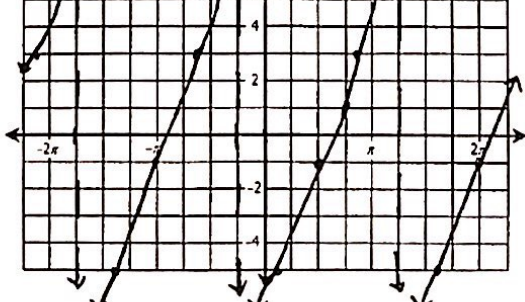
Amplitude: 1

Period: 4π

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

Vertical Shift: down 1

Midline: $y = -1$

<p>5. $f(x) = \sin\left(\frac{4}{3}\left(x + \frac{3\pi}{2}\right)\right) + 2$</p>		<p>Amplitude: 1</p> <p>Period: $\frac{3\pi}{2}$</p> <p>Phase Shift: Left $\frac{3\pi}{2}$</p> <p>Vertical Shift: up 2</p> <p>Midline: $y = 2$</p>
<p>6. $f(x) = \frac{3}{2} \cdot \cos\left(\frac{2}{3}\left(x - \frac{\pi}{4}\right)\right)$</p>		<p>Amplitude: $\frac{3}{2}$</p> <p>Period: 3π</p> <p>Phase Shift: Right $\frac{\pi}{4}$</p> <p>Vertical Shift: None</p> <p>Midline: $y = 0$</p>
<p>7. $f(x) = 3 \cdot \tan\left(\frac{1}{3}(x + \pi)\right) + 1$</p>		<p>Amplitude: undef</p> <p>Period: 3π</p> <p>Phase Shift: Left π</p> <p>Vertical Shift: up 1</p> <p>Midline: $y = 1$</p>
<p>8. $f(x) = -2 \cdot \cos\left(x + \frac{5\pi}{4}\right) + 3$</p>		<p>Amplitude: 2</p> <p>Period: π</p> <p>Phase Shift: Left $\frac{5\pi}{4}$</p> <p>Vertical Shift: up 3</p> <p>Midline: $y = 3$</p>
<p>6. $f(x) = 4 \cdot \tan\left(\frac{2}{3}\left(x - \frac{\pi}{2}\right)\right) - 1$</p>		<p>Amplitude: undef</p> <p>Period: $\frac{3\pi}{2}$</p> <p>Phase Shift: Right $\frac{\pi}{2}$</p> <p>Vertical Shift: down 1</p> <p>Midline: $y = 1$</p>