Precalculus   Name_____
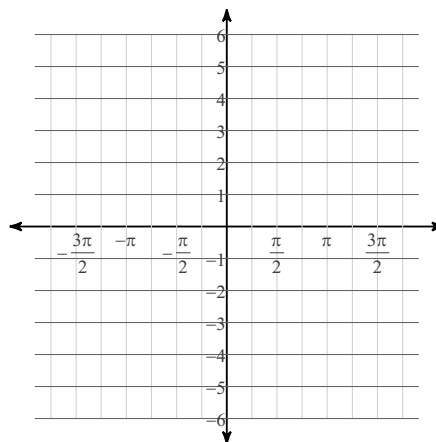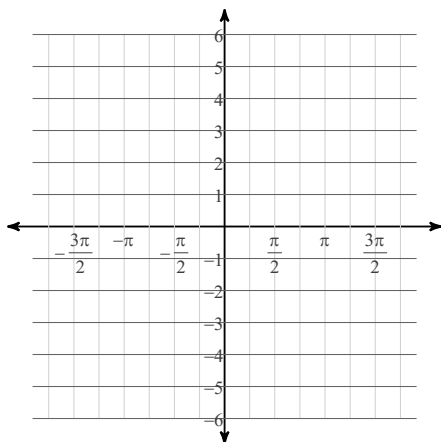Graphing Trig Functions Practice   Date_____ Period_____

Find the amplitude, the period in radians, the minimum and maximum values, and two vertical asymptotes (if any). Then sketch the graph using radians.
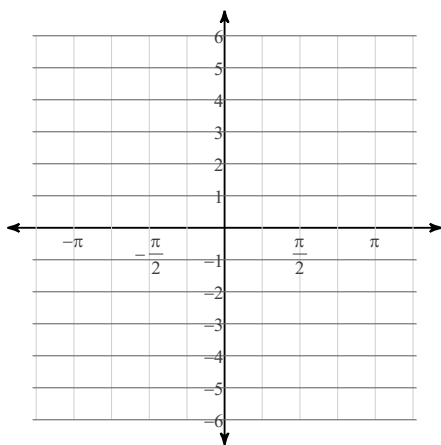
1) $y = 4\sin\theta$ 2) $y = 3\cos\theta$

Find the amplitude, the period in radians, the phase shift in radians, the vertical shift, the minimum and maximum values, and two vertical asymptotes (if any). Then sketch the graph using radians.
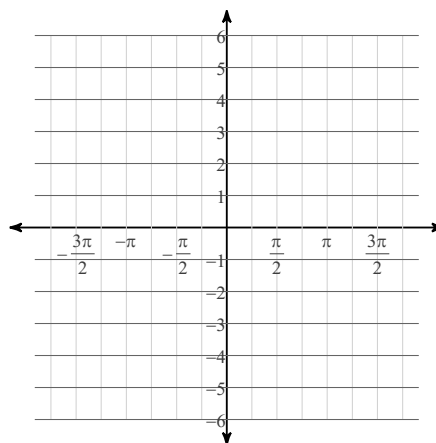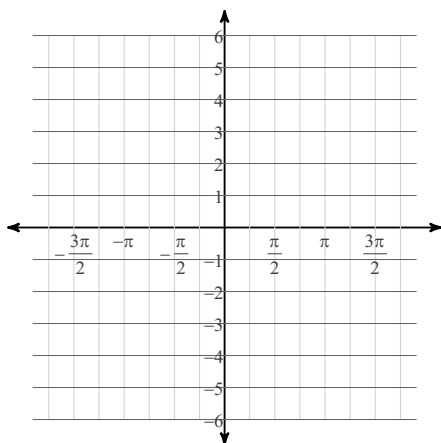
3) $y = \tan\left(\theta - \dfrac{\pi}{4}\right) + 2$

Find the amplitude, the period in radians, the phase shift in radians, and the vertical shift. Then sketch the graph using radians.
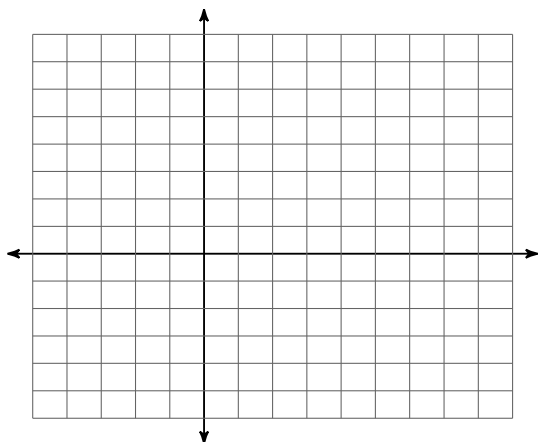
4) $y = 2\sin\left(\theta - \dfrac{\pi}{4}\right) - 2$

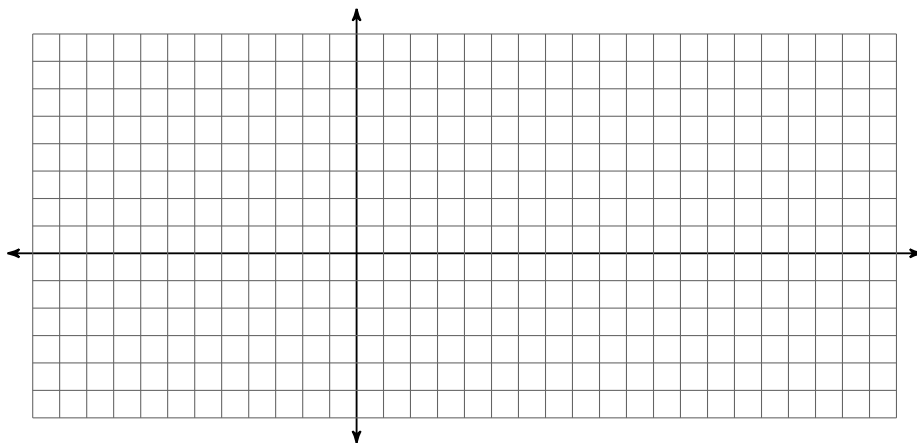5) $y = 2\cos\left(\theta + \dfrac{3\pi}{4}\right) + 1$

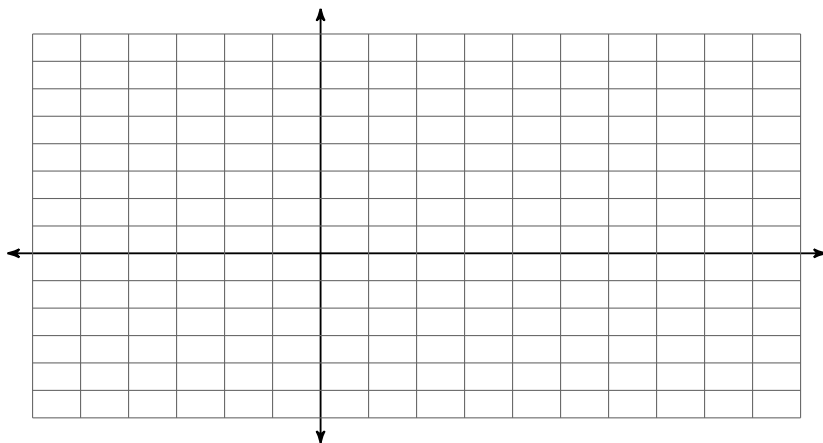**List the period, midline, minimum and maximum of each trigonometric function. Sketch the graph.**

6) $y = 3\sin\left(2x - \pi\right) - 1$

7) $y = 4\cos\left(\dfrac{1}{4}x + \pi\right) + 2$

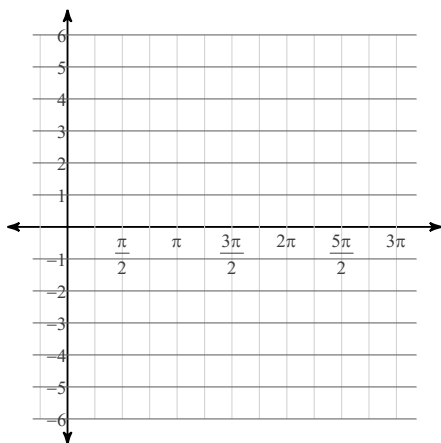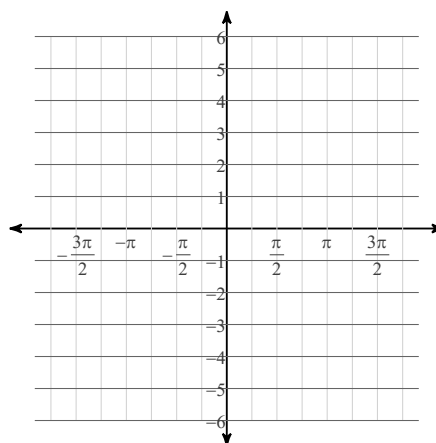8) $y = -2\sin\left(3x + 2\pi\right) + 1$

Find the period in radians, the minimum and maximum values, and two vertical asymptotes (if any). Then sketch the graph using radians.
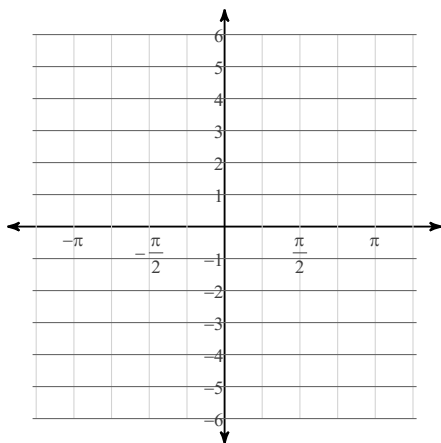
9) $y = 2\sec\ \theta$

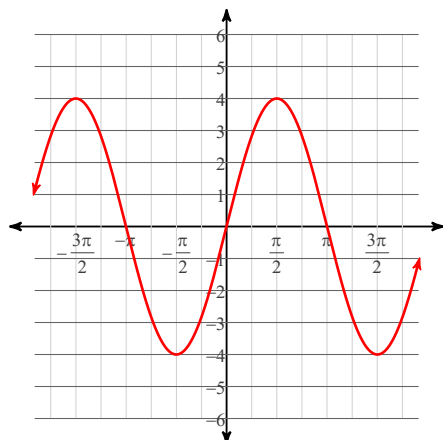10) $y = 2\csc\left(\theta - \dfrac{\pi}{2}\right) - 1$

11) $y = 3\tan\left(2\theta + \dfrac{3\pi}{2}\right) - 2$

Precalculus

Name_____

Graphing Trig Functions Practice
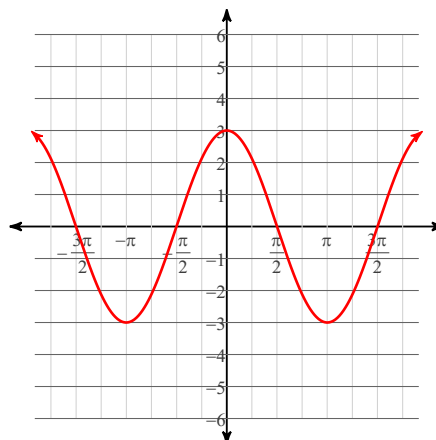
Date_____ Period_____

Find the amplitude, the period in radians, the minimum and maximum values, and two vertical asymptotes (if any). Then sketch the graph using radians.

1) $y = 4\sin\theta$

Amplitude: 4
Period: 2π
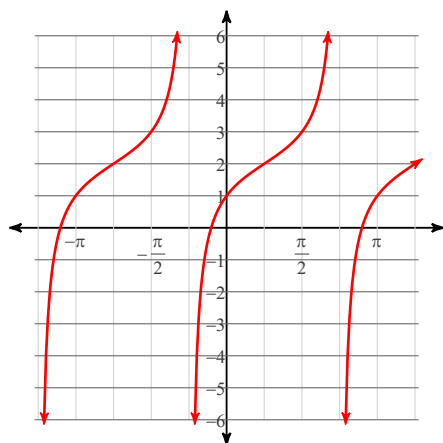Min: -4
Max: 4
Vert asym: None

2) $y = 3\cos\theta$

Amplitude: 3
Period: 2π
Min: -3
Max: 3
Vert asym: None

Find the amplitude, the period in radians, the phase shift in radians, the vertical shift, the minimum and maximum values, and two vertical asymptotes (if any). Then sketch the graph using radians.
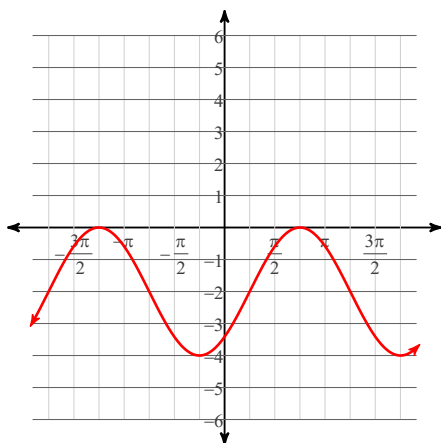
3) $y = \tan\left(\theta - \dfrac{\pi}{4}\right) + 2$

Amplitude: None
Period: π

Phase shift: Right $\dfrac{\pi}{4}$

Vert. shift: Up 2
Min: None
Max: None

Vert asym: $x = \dfrac{3\pi}{4}$
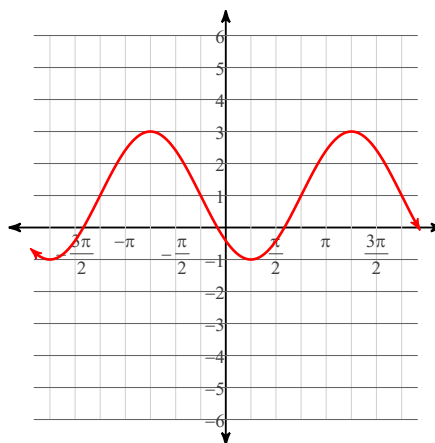
$x = -\dfrac{\pi}{4}$

Find the amplitude, the period in radians, the phase shift in radians, and the vertical shift. Then sketch the graph using radians.

4) $y = 2\sin\left(\theta - \dfrac{\pi}{4}\right) - 2$

Amplitude: 2
Period: 2π

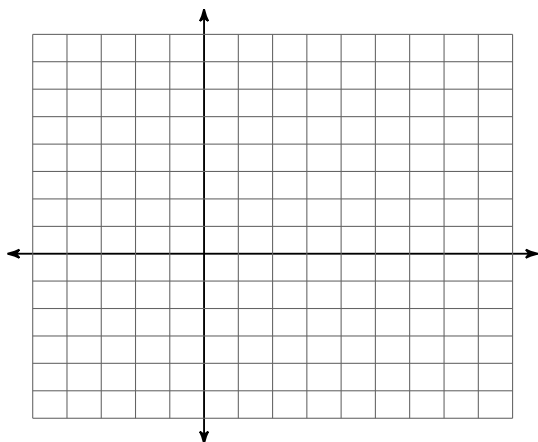Phase shift: Right $\dfrac{\pi}{4}$

Vert. shift: Down 2

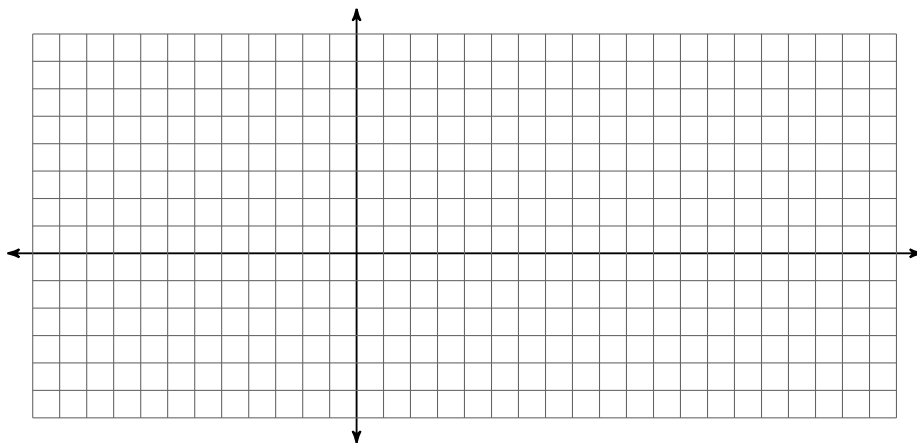5) $y = 2\cos\left(\theta + \dfrac{3\pi}{4}\right) + 1$

Amplitude: 2
Period: 2π

Phase shift: Left $\dfrac{3\pi}{4}$

Vert. shift: Up 1

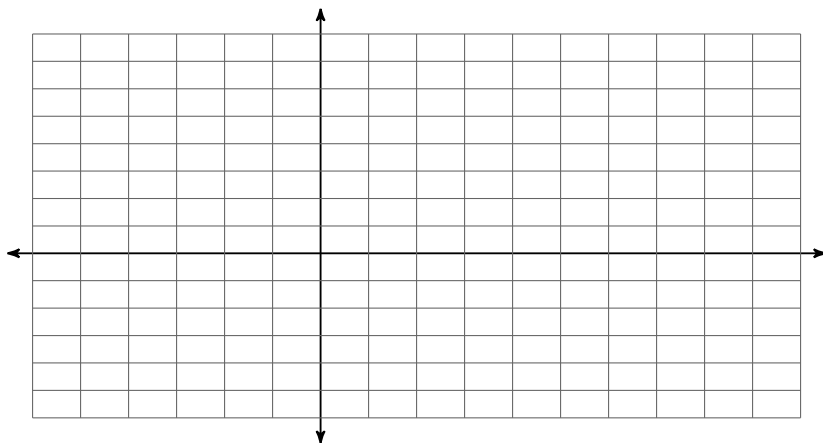**List the period, midline, minimum and maximum of each trigonometric function. Sketch the graph.**

6) $y = 3\sin(2x - \pi) - 1$

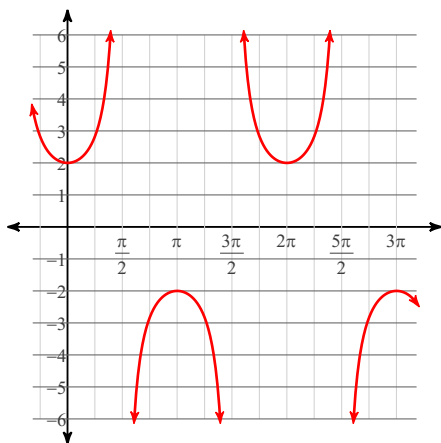7) $y = 4\cos\left(\dfrac{1}{4}x + \pi\right) + 2$
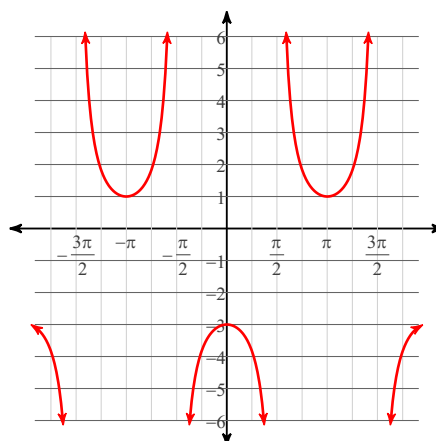
8) $y = -2\sin\left(3x + 2\pi\right) + 1$

Find the period in radians, the minimum and maximum values, and two vertical asymptotes (if any). Then sketch the graph using radians.
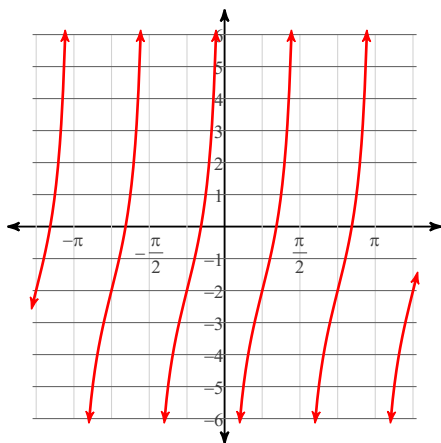
9) $y = 2\sec\theta$

Period: 2π
Min: None
Max: None

Vert asym: $x = \dfrac{\pi}{2}$

$x = -\dfrac{\pi}{2}$

10) $y = 2\csc\left(\theta - \dfrac{\pi}{2}\right) - 1$

Period: 2π
Min: None
Max: None

Vert asym: $x = \dfrac{\pi}{2}$

$x = \dfrac{3\pi}{2}$

11) $y = 3\tan\left(2\theta + \dfrac{3\pi}{2}\right) - 2$

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

Min: None
Max: None

Vert asym: $x = -\dfrac{\pi}{2}$

$x = -\pi$