

For each trigonometric function described below find the amplitude, period, phase shift, and vertical shift.  
Graph each function.

1.  $y = -4 \sin(\theta - 90^\circ) + 3$

Amplitude:

Period:

Phase Shift:

Vertical Shift:

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

Amplitude:

Period:

Phase Shift

Vertical Shift:

3.  $y = \tan\left(x + \frac{\pi}{4}\right)$

Amplitude:

Period:

Phase Shift:

Vertical Shift:

4.  $y = 5 \cos(2x + \pi) - 2$

Amplitude:

Period:

Phase Shift:

Vertical Shift:

5.  $y = -\frac{1}{2} \sin(3\theta - 180^\circ) + \frac{1}{2}$

Amplitude:

Period:

Phase Shift:

Vertical Shift:

6.  $y = 2 \sec(x) + 1$

Amplitude:

Period:

Phase Shift:

Vertical Shift:

Multiple Choice Review!

For each radian or degree measure, choose the trigonometric values that are correct. **Multiple correct answers per question are possible.**

7.  $x = \frac{3\pi}{4}$

a.  $\sin x = -\frac{\sqrt{2}}{2}$

b.  $\cos x = \frac{\sqrt{2}}{2}$

c.  $\sin x = \frac{\sqrt{2}}{2}$

d.  $\tan x = 1$

e.  $\csc x = \sqrt{2}$

8.  $\theta = 300^\circ$

a.  $\sin \theta = -\frac{\sqrt{3}}{2}$

b.  $\sec \theta = 2$

c.  $\cot \theta = -\sqrt{3}$

d.  $\tan x = -\frac{\sqrt{3}}{3}$

e.  $\csc x = \frac{2\sqrt{3}}{3}$

Find the value of the unique real number  $\theta$  between  $0^\circ$  and  $360^\circ$  that satisfies the two given conditions. **Only one answer is possible.**

9.  $\csc \theta = -2$  and  $\tan \theta < 0$ .

a.  $60^\circ$

b.  $120^\circ$

c.  $150^\circ$

d.  $300^\circ$

e.  $330^\circ$

10.  $\cos \theta = -\frac{\sqrt{3}}{2}$  and  $\csc \theta < 0$ .

a.  $120^\circ$

b.  $150^\circ$

c.  $210^\circ$

d.  $240^\circ$

e.  $300^\circ$