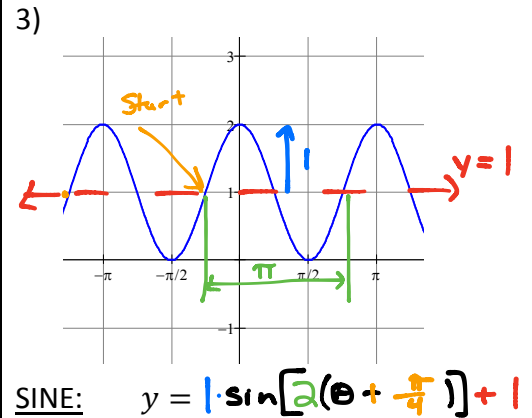
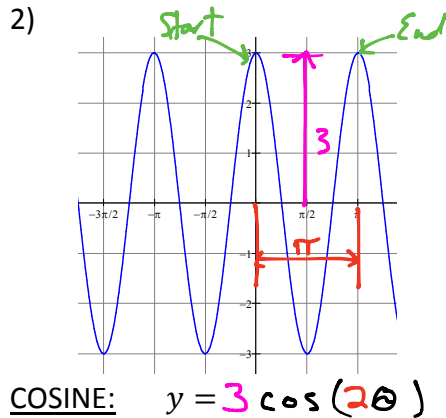
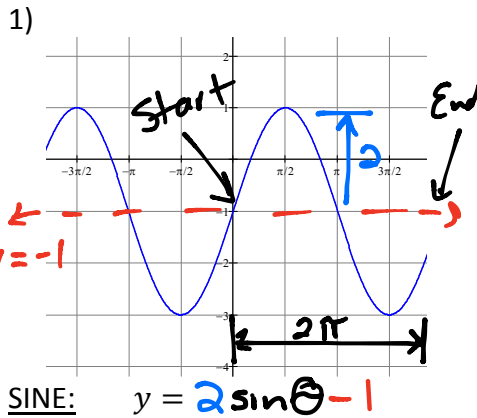


Name: _____ Date: _____ Period: _____

Unit 10 REVIEW – Graphing Trig Functions

Pre-Calculus

For 1-3, write the given function for each graph. Use a phase shift, not a negative coefficient.



4) Write the equation of a sine curve with the following transformations:

- One full period occurs 6 times between 0 and 2π
- Stretch vertically 2.

$y = 2 \sin(6\theta)$

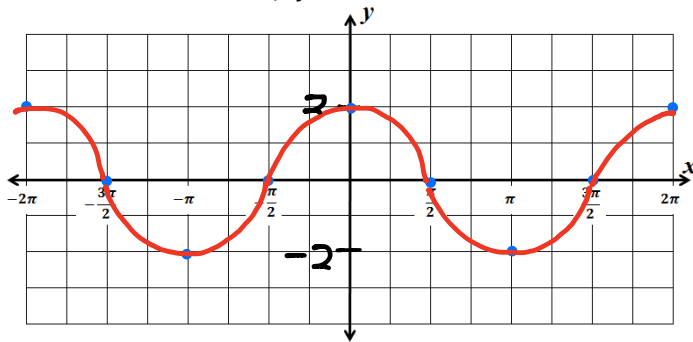
For 5-6, state the amplitude, period, phase shift, and vertical shift.

5) $y = 3 \cos(5x - \pi)$
 $y = 3 \cos\left[5\left(x - \frac{\pi}{5}\right)\right]$
 amp = $|3| = 3$ period = $\frac{2\pi}{5}$
 p.s. = $\frac{\pi}{5}$ v.s. = 0

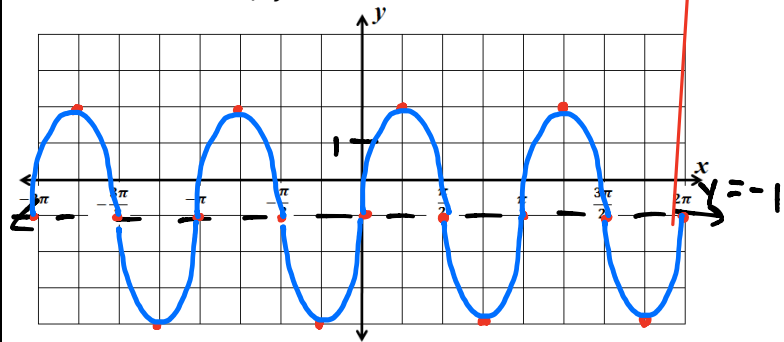
6) $y = \frac{1}{2} \sin 4x - 2$
 amp = $\left|\frac{1}{2}\right| = \frac{1}{2}$ period = $\frac{2\pi}{4} = \frac{\pi}{2}$
 p.s. = 0 v.s. = -2

For 7-14, graph the function. Use the entire grid left to right.

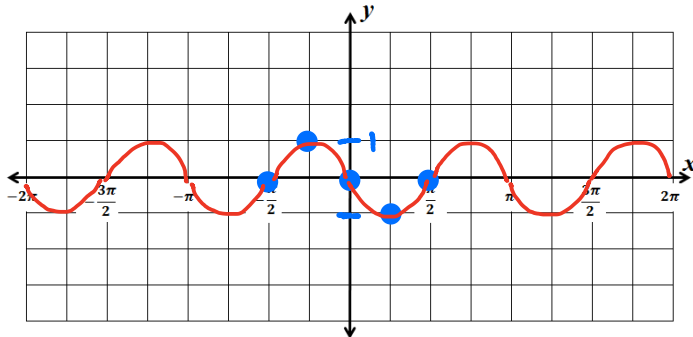
7) $y = 2 \cos x$



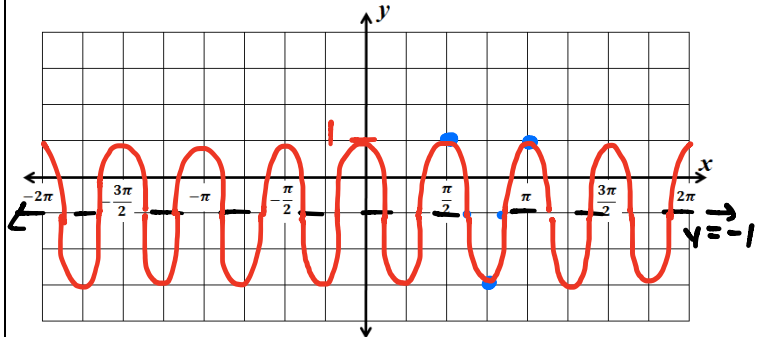
8) $y = 3 \sin 2x - 1$



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

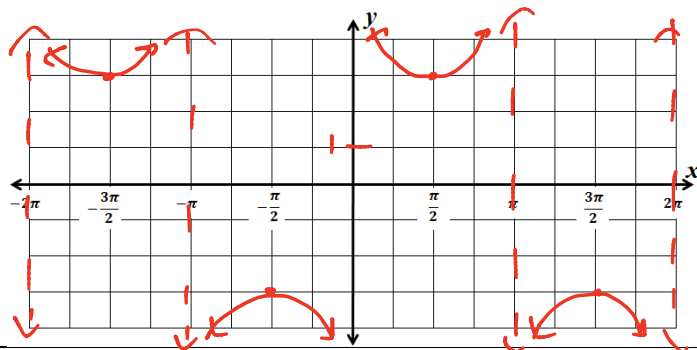


10) $y = 2 \cos(4x - 2\pi) - 1$



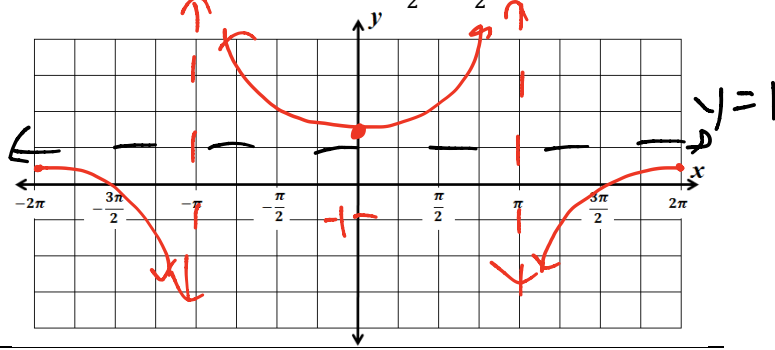
Final Review

11) $y = 3 \csc x$

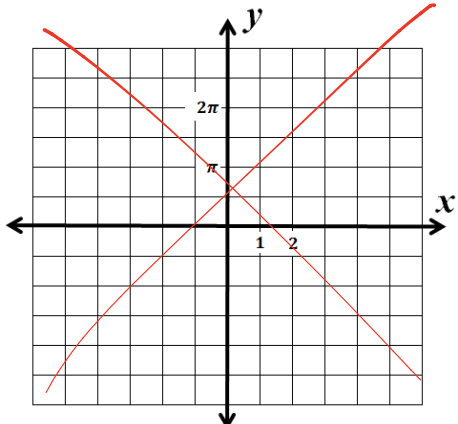


$y = \frac{1}{2} \sec\left(\frac{1}{2}x\right) + 1$

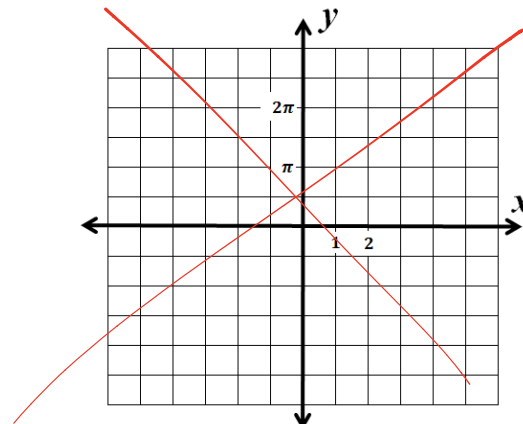
12) $y = 1 + \frac{1}{2} \sec \frac{x}{2}$



13) $y = \cos^{-1}(x + 1)$



14) $y = 2 \tan^{-1} x$



For 16 – 18, find the exact value of the expression.

16) $\cos\left(\arcsin\left(\frac{\sqrt{3}}{2}\right)\right)$
 $= \frac{1}{2}$

17) $\tan\left(\arcsin\left(\frac{1}{2}\right)\right)$
 $= \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

18) $\tan\left(\arccos\left(\frac{\sqrt{2}}{2}\right)\right)$
 $= \frac{\sqrt{2}}{\sqrt{2}} = 1$

For 19 – 21, find the approximate value by using a calculator. Use degree mode.

19) $\cot^{-1}\left(\frac{13}{10}\right) \approx 37.568^\circ$
 $\tan^{-1}\left(\frac{10}{13}\right)$

20) $\csc(68^\circ) \approx 1.079$
 $\frac{1}{\sin 68^\circ}$

21) $\sec^{-1}(6) \approx 80.406^\circ$
 $\cos^{-1}\left(\frac{1}{6}\right)$

For 22 – 24, use a reference triangle to find the exact value of the expression. Draw a triangle!

22) $\tan\left(\sin^{-1}\frac{12}{13}\right)$
 $= \frac{12}{5}$

23) $\sec\left(\arccsc\frac{10}{6}\right)$
 $= \frac{5}{4}$

24) $\cot\left(\csc^{-1}\frac{3}{2}\right)$
 $= \frac{\sqrt{5}}{2}$

