

Pre Calculus
Graphing Trig. Functions # 2

Name: _____
Block: _____

State the amplitude, period, phase shift and vertical shift of each function. Then, graph at least one period of each function. Be sure to label the scale on your axes.

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

2. $y = \tan(2x) + 3$

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

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

5. $y = -2 \sin\left(\frac{x}{3}\right) - 1$

6. $y = \frac{1}{2} \sin\left(x + \frac{\pi}{3}\right) + 2$

7. $y = -\cos 2\left(x - \frac{\pi}{6}\right) + 3$

8. $y = \cos(3x + \pi) + 5$

9. $y = 5 \sin\left(\frac{x}{4} + \frac{\pi}{8}\right) - 1$

Write two equations of the cosine function with:

10. amplitude = 5, period = 4π , phase shift = $\frac{\pi}{6}$, vertical shift none

11. amplitude = 1, period = $\frac{\pi}{4}$, phase shift = π , vertical shift = -1

Write two equations of the sine function with:

12. amplitude = 6, period = $\frac{\pi}{2}$, phase shift = $-\frac{\pi}{8}$, vertical shift none.

13. amplitude = $\frac{1}{2}$, period = 2π , phase shift = none, vertical shift = 3

In questions 14-16, list the amplitude, period, phase shift, and vertical shift of each graph. Then, write the equation of the graph using the indicated parent function.

14. $y = \sin x$

15. $y = \tan x$

16. $y = \cos x$

