

For each of the following: (Use a separate sheet of paper! ... graph paper preferably!)

- a) Graph each function . Label the axes.
- b) State the amplitude (if applicable)
- c) State the period

1.  $y = \sin x$

2.  $y = \cos x$

3.  $y = \tan x$

4.  $y = \csc x$

5.  $y = \sec x$

6.  $y = \cot x$

7.  $y = -\sin x$

8.  $y = -\cos x$

9.  $y = -\tan x$

10.  $y = 2 \cot(x)$

11.  $y = \frac{1}{4} \sin\left(\frac{x}{3}\right)$

12.  $y = \cos(3x)$

13.  $y = -2\sin(2x)$

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

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

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

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

18.  $y = -\tan\left(\frac{x}{3}\right)$

For questions 19 – 21, write two equations of the sine function with each amplitude and period.

19. amplitude = 5, period =  $2\pi$

20. amplitude =  $\frac{2}{3}$ , period =  $\pi$

21. amplitude = 2, period = 4

For questions 22 – 24, write two equations of the cosine function with each amplitude and period.

22. amplitude = 1, period =  $\frac{2\pi}{3}$

23. amplitude =  $\frac{1}{2}$ , period =  $\frac{\pi}{4}$

24. amplitude = 3, period =  $\frac{1}{2}$

25. Write the equation of the graph given below.

