

F.S.T.
Homework 4-7

Name: _____
Block: _____

For each function in questions 1-3, list the following:

- a) Domain*
- b) Range*
- c) Amplitude (if applicable)*
- d) Period*
- e) x-intercepts*

Then, graph two periods of each function. Label both axes with the scale you used.

1. $y = \sin x$

2. $y = \tan x$

3. $y = \cos x$

For each function, list the following:

- a) Amplitude (if applicable)*
- b) Period*

Then, graph two periods of each function. Label both axes with the scale you used.

4. $y = 4 \sin x$

5. $y = \frac{1}{3} \cos x$

6. $y = -\tan x$

7. $y = \cos(2x)$

8. $y = \tan(4x)$

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

$$10. y = \frac{1}{4} \sin\left(\frac{x}{3}\right)$$

$$11. y = 6 \cos(3x)$$

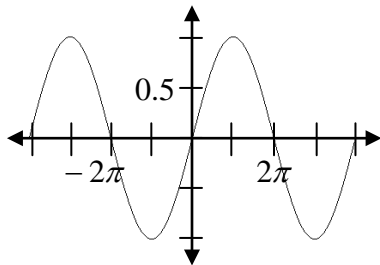
$$12. y = 0.5 \tan\left(\frac{x}{4}\right)$$

$$13. y = -\sin(4x)$$

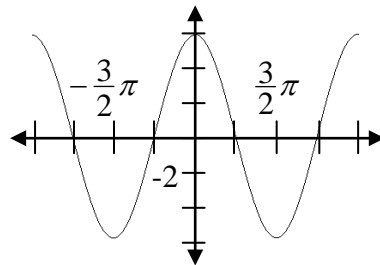
$$14. y = \frac{-2}{3} \cos\left(\frac{x}{6}\right)$$

In questions 15-17, list the amplitude and period. Then, write the equation of the given graph.

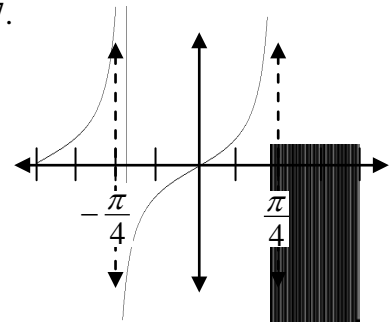
15.



16.



17.



18. Given the function $y = \sin x \dots$

a) Find the equation of the image under the transformation $(x, y) \rightarrow (4x, \frac{1}{2}y)$.

b) Graph the parent and the image on the same set of axes. List the amplitude and period of both the parent and the image.