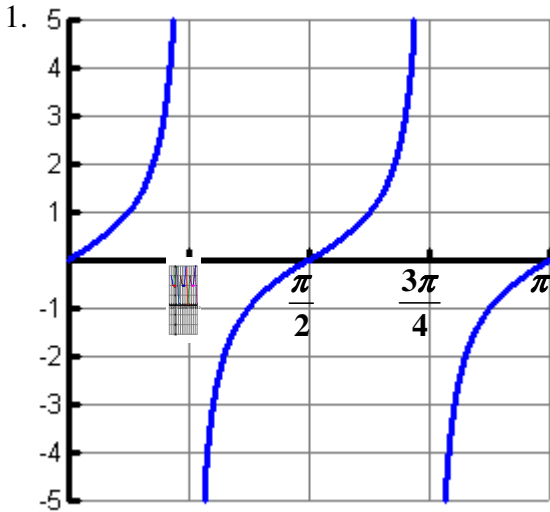


For each graph list the domain and range in interval notation, the amplitude, period, and equation of the graph.



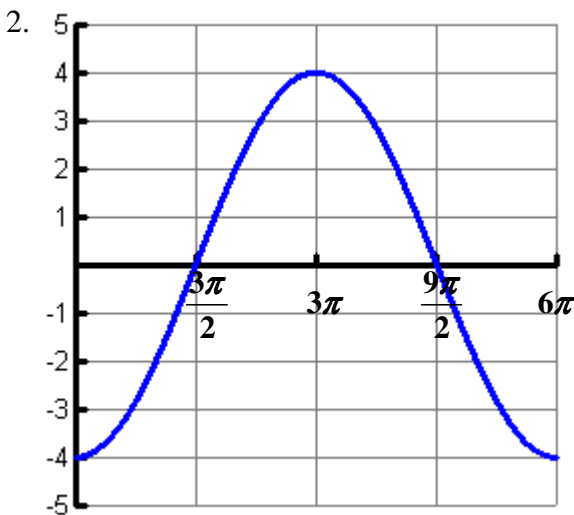
Domain:

Range:

Amplitude:

Period:

Equation:



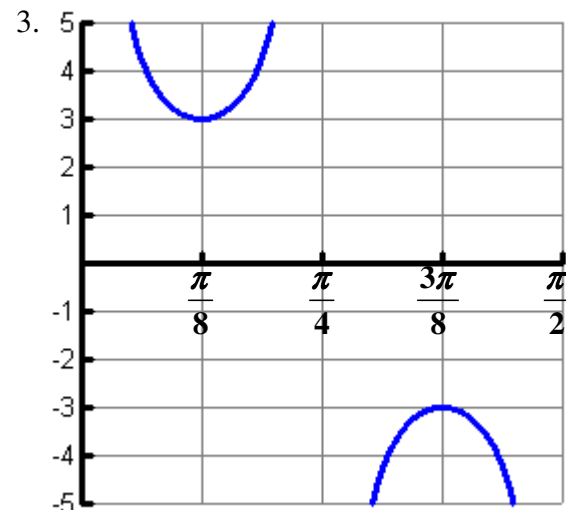
Domain:

Range:

Amplitude:

Period:

Equation:



Domain:

Range:

Amplitude:

Period:

Equation:

Graph each of the following. List the amplitude, period, domain, and range for each function. Be sure to use radians for  $x$  and degrees for  $\theta$ .

4.  $y = \frac{1}{2} \sin x$

Amplitude:

Period:

Domain:

Range:

5.  $y = \cos 2\theta$

Amplitude:

Period:

Domain:

Range:

6.  $y = -4 \cos x$

Amplitude:

Period:

Domain:

Range:

7.  $y = -\csc \theta$

Amplitude:

Period:

Domain:

Range:

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

Amplitude:

Period:

Domain:

Range:

9.  $y = \tan 2\theta$

Amplitude:

Period:

Domain:

Range:

10.  $y = \cot x$

Amplitude:

Period:

Domain:

Range:

11.  $y = -\sec\left(\frac{1}{2}x\right)$

Amplitude:

Period:

Domain:

Range:

Multiple Choice. Circle ALL answers that apply. **Multiple responses are possible.**

12. These functions have asymptotes at the “odd” spots. (i.e. 90, 270, etc...)

a. cosecant

b. secant

c. tangent

d. cotangent

13. These functions have a period of  $4\pi$ .

a.  $y = \sin(2x)$

b.  $y = \tan\left(\frac{1}{2}x\right)$

c.  $y = \csc\left(\frac{1}{2}x\right)$

d.  $y = \cot\left(\frac{1}{4}x\right)$

14. These functions are all positive in quadrant II.

a.  $y = -3\cos\theta$

b.  $y = 3\sin\theta$

c.  $y = \frac{1}{3}\csc\theta$

d.  $y = -\frac{1}{4}\cot\theta$

True or False. Justify each answer.

15. The graph on the right has an amplitude.

16. The graph below has a period of 5.

