Math 1330
Homework 18 (5.3a)

Problem 5.3.16 refers to problem 16 in Chapter 5, Section 3 of the online text. Record your answers to all the problems in the EMCF titled "**Homework 18**."

1.   Problem 5.3.16:   Which of these gives the "helper" graph that might come in handy
                          when you graph this problem?

A. $f(x) = \dfrac{1}{2}\cos\left[3(x+\pi)\right]$

B. $f(x) = \dfrac{1}{2}\sin\left[3x+\pi\right]$

C. $f(x) = \dfrac{1}{2}\sin\left[3(x+\pi)\right]$

D. $f(x) = \dfrac{1}{2}\cos\left[3x+\pi\right]$

2.   Problem 5.3.18:

A.   Stretch vertically, stretch horizontally, shift right $\dfrac{\pi}{9}$

B.   Stretch vertically, shrink (compress) horizontally, shift left $\dfrac{\pi}{3}$

C.   Stretch vertically, stretch horizontally, shift left $\dfrac{\pi}{9}$

D.   Stretch vertically, stretch horizontally, shift left $\dfrac{\pi}{3}$

E.   None of the above

3.   Problem 5.3.20:

A.   Reflect in the x-axis, stretch horizontally, shift right π

B.   Reflect in the x-axis, shrink (compress) horizontally, shift right π

C.   Reflect in the x-axis, shrink (compress) horizontally, shift up π

D.   Reflect in the x-axis, stretch horizontally, shift up π

E.   None of the above

4.   Problem 5.3.40: Which of these is/are the asymptote(s) of the graph of the function on $0 < x < 2\pi$?

A. $x = 0$ B. $x = -\pi$

C. $x = \pi$ D. $x = -\pi, \ x = \pi$

E. $x = -\pi, \ x = 0, \ x = \pi$

5.   Problem 5.3.42: Which of these gives the "helper" graph that might come in handy
                when you graph this problem?

A. $g(x) = 2\sin(x) - 3$ B. $g(x) = 2\tan(x) - 3$

C. $g(x) = \dfrac{2}{\sec(x)} + 3$ D. $g(x) = 2\cos(x) - 3$

E. $g(x) = \dfrac{1}{2\sec(x) - 3}$

6.   Problem 5.3.42: Which of these gives the period of the function?

A. π B. 2π C. $\dfrac{\pi}{2}$ D. 2 E. 4

7.   Problem 5.3.42: Which of these is a zero of the function?

A.   there are no zeros   B. $x = \dfrac{\pi}{6}$

C. $x = \sin^{-1}\left(\dfrac{2}{3}\right)$ D. $x = \cos^{-1}\left(\dfrac{3}{2}\right)$

E. $x = \cos^{-1}\left(\dfrac{2}{3}\right)$

8.   Problem 5.3.42: Which of these is an asymptote of the graph of the function?

A. $x = \dfrac{\pi}{2}$ B. $x = 2\pi$ C. $x = \pi$ D. $x = \dfrac{\pi}{3}$ E. $x = \dfrac{\pi}{4}$

9.   Problem 5.3.44: Which of these gives the period of the function?

A. $\dfrac{\pi}{5}$ B. 5π C. 6π D. 10π E. 5

10. Problem 5.3.50: Which of these gives the period of the function?

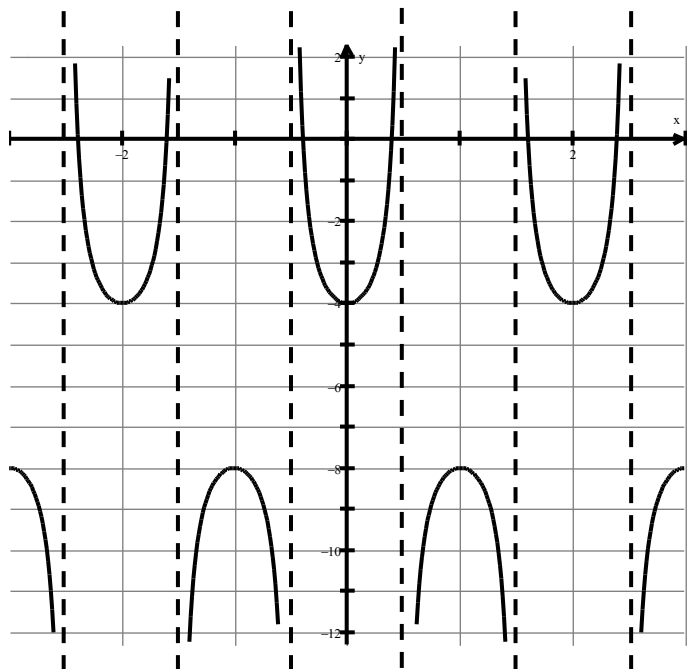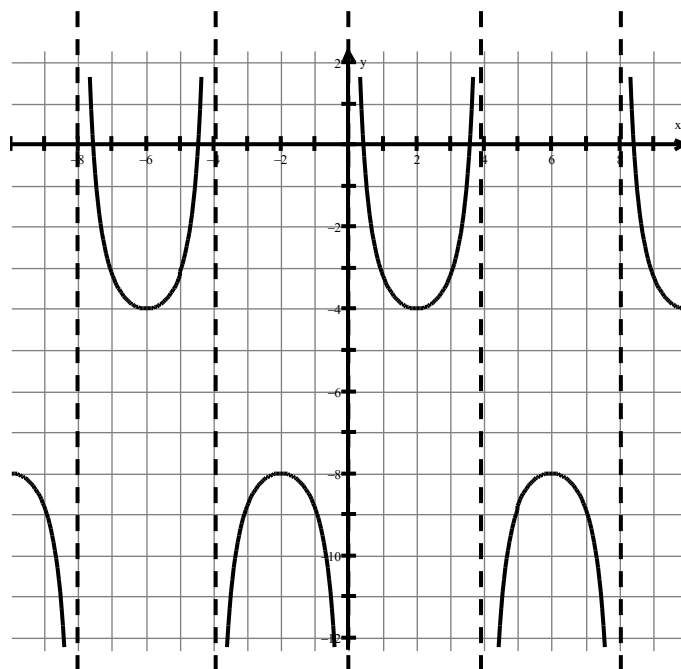A. $\dfrac{\pi}{4}$ B. $\dfrac{\pi}{2}$ C. 8   D. $\dfrac{1}{2}$ E. 8π

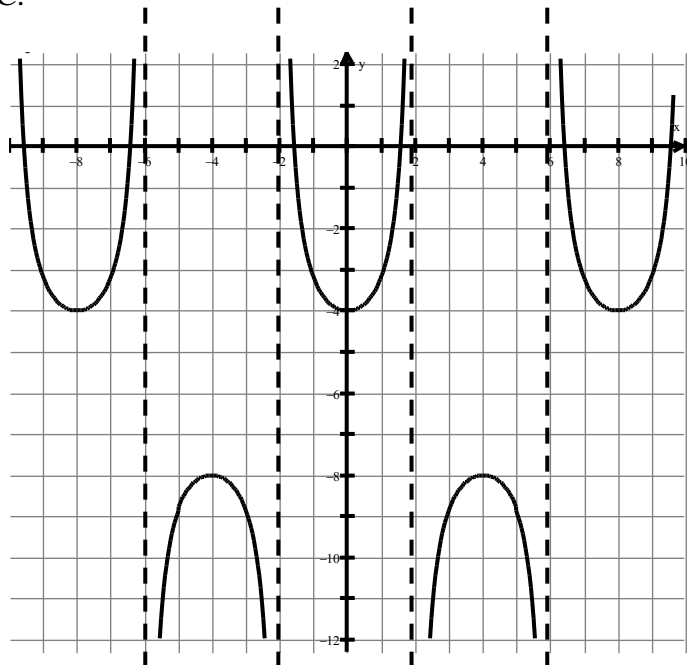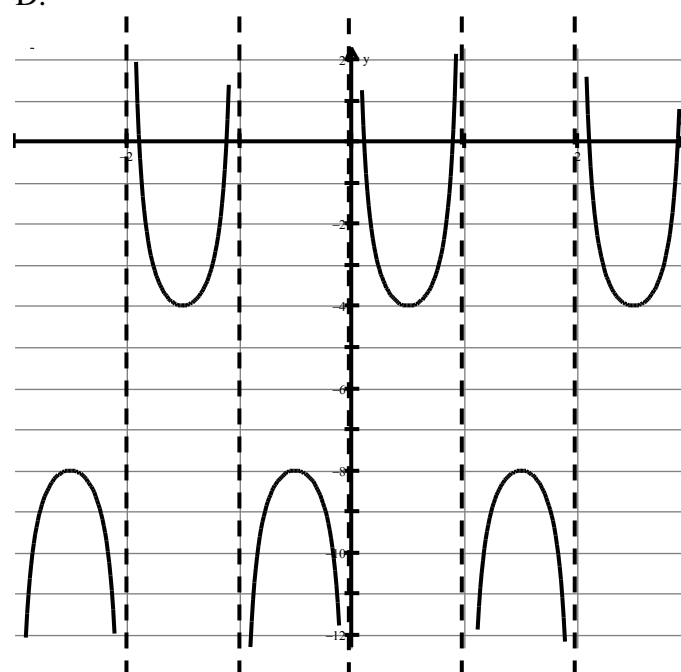11. Problem 5.3.50: Which of these is the graph of the function?

A.

B.

C.
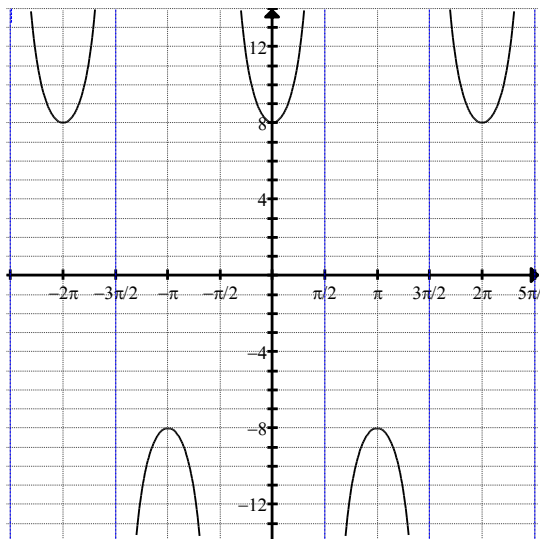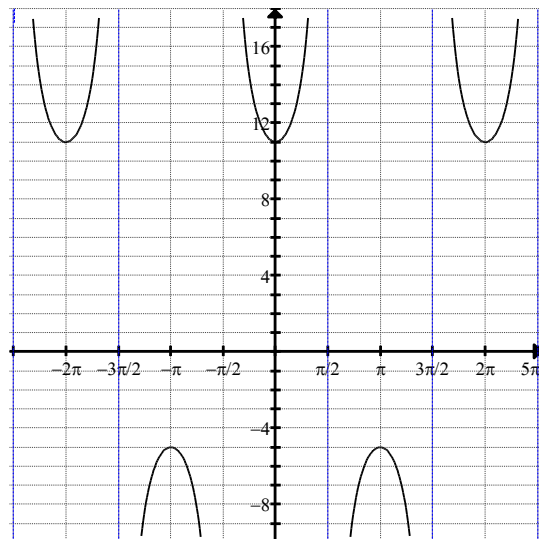

D.

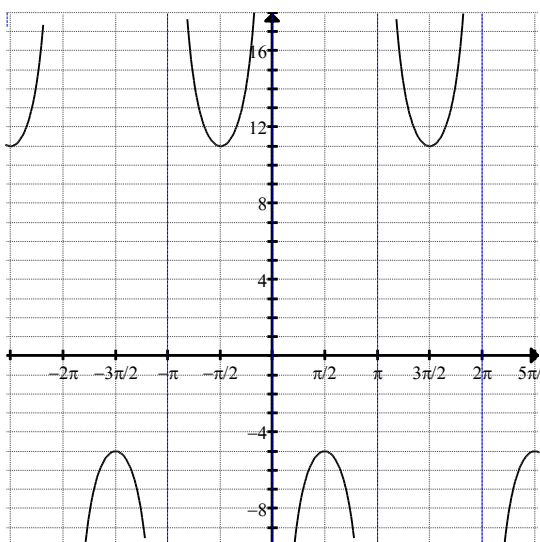12.   Problem 5.3.52:   Which of these is the graph of the function?
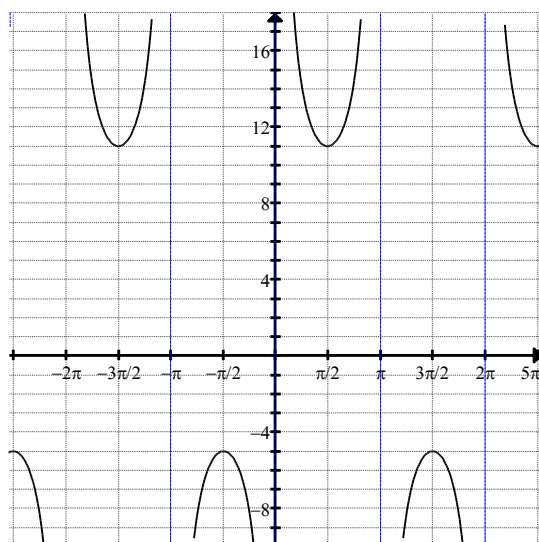
A.

B.

C.

D.

13.   Problem 5.3.54:   Which of these is an asymptote of the graph of the function?
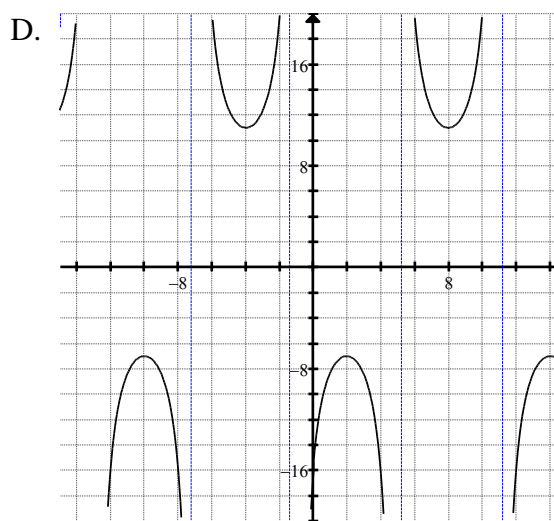
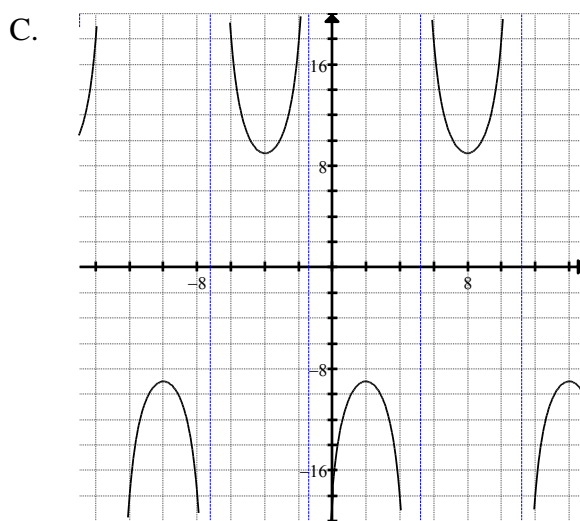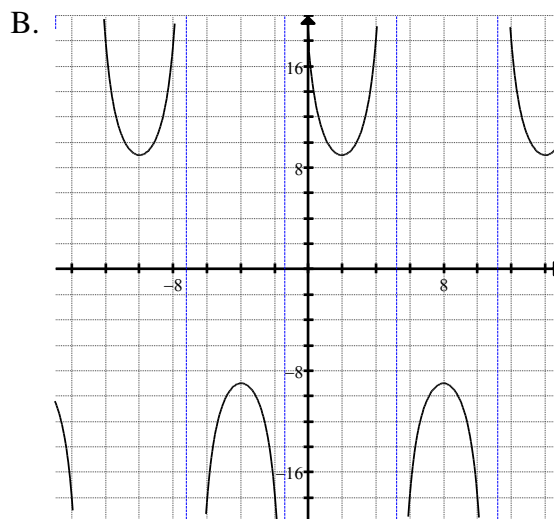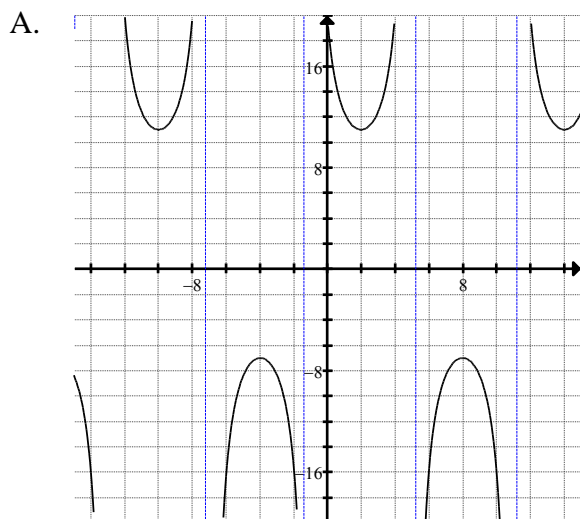A. $x = \dfrac{1}{4}$ B. $x = \dfrac{3}{4}$

C. $x = \dfrac{1}{3}$ D. $x = \dfrac{1}{6}$

E. $x = \dfrac{3}{2}$

14.   Problems 5.3.58:   Which of these is the graph of the function?

A.

B.

C.

D.

15.   Problem 5.3.64 a:

A. $f(x) = 3 \sec(x) + 2$ B. $f(x) = 2 \sec(x) + 3$

C. $f(x) = 2 \sec\left(x + \dfrac{\pi}{2}\right) + 3$ D. $f(x) = 2 \sec\left(x - \dfrac{\pi}{2}\right) + 3$

E.   None of the above