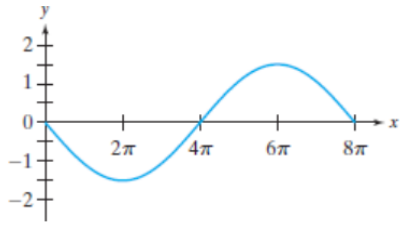
5.5, #16,26: Identify the amplitude and period for the following functions:
(a). $y = 2\cos(2x)$.

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

(c). $y = \sin\left(\frac{\pi}{3}x\right)$.

5.5, #34: Write trig functions of the following forms for the graph below



(a). $y = A\sin(Bx)$, where $A < 0$.

(b). $y = A\sin(Bx - C)$ where $A > 0$.

(c). $y = A\cos(Bx - C)$, where $A < 0$.

(d). $y = A\cos(Bx - C)$, where $A > 0$.

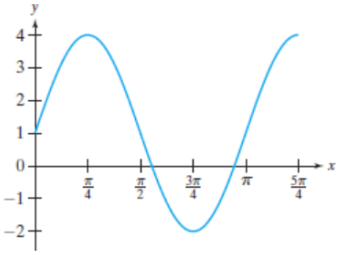
5.5, #78b: Identify the amplitude, period, and phase shift for $y = 2\sin(-3x - 2\pi) + 12$. Then, find the range of the function this is the graph for and graph a full period of the function, identifying the key points as they appear.

5.5, #65 (modified): Identify the amplitude, period, phase shift, and vertical shift for $y = \cos\left(-\frac{\pi}{2}x + \frac{\pi}{4}\right) + 4$. Then, graph a full period of the function, identifying the key points as they appear.

5.5, #72: The monthly high temperature for Atlantic City, New Jersey, peaks at an average high of 86° in July and goes down to an average high of 64° in January. Assume that this pattern for monthly high temperatures continues indefinitely and behaves like a cosine wave.
(a). Write a function of the form $H(t) = A\cos(Bt - C) + D$ to model the average high temperature. The value $H(t)$ is the average high temperature for month t, with January as $t = 0$.

(b). Graph the function from part (a) on the interval $[0, 13]$ and plot the points $(0, 64)$, $(6, 86)$, and $(12, 64)$ to check the accuracy of your model.

5.5, #86: Write functions of the form $y = A\sin(Bx - C) + D$ and $y = A\cos(Bx - C) + D$ with $A > 0$ in both cases for the following graph.



5.5, #82: Write a function of the form $y = A\cos(Bx - C) + D$ that has period $\frac{\pi}{4}$, amplitude 2, phase shift $-\frac{\pi}{3}$, and vertical shift 7.

5.6, #21: Graph one period of the function $y = 3\csc\frac{x}{3}$.

Deriving the Graphs for $\tan x$ and $\cot x$:

$y = \tan x$:

$y = \cot x$:

5.6, # 34: Write the range for the following functions in interval notation.

(a). $y = -3\sec(5\pi x) - 1$.

(b). $y = 5\sec\left(3x - \frac{\pi}{2}\right) - 2$.

5.6, # 50/54,52/56: Graph the following:

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

(b). $y = -\cot\frac{\pi}{4}x - 3$.

5.6, # 66,68: Complete the following statements.

(a). As $x \to 0^-$, $\cot x \to$ _____

(b). As $x \to 0^+$, $\cot x \to$ _____

(c). As $x \to \frac{\pi}{2}^-$, $\sec x \to$ _____

(d). As $x \to \frac{\pi}{2}^+$, $\sec x \to$ _____