

# Math 1613 - Trigonometry

Quiz #12 - 2018.10.01

Solutions

---

Sketch the graph of the function  $y = 2 \cos\left(\frac{1}{2}x - \frac{\pi}{6}\right) - 1$  over two periods. Be sure to compute amplitude and period.

First, we find a single period by solving the inequality  $0 \leq \frac{1}{2}x - \frac{\pi}{6} \leq 2\pi$  gives  $\frac{\pi}{3} \leq x \leq \frac{13\pi}{3}$ . The amplitude is 2, and the graph of  $\cos$  is moved down 1 unit.

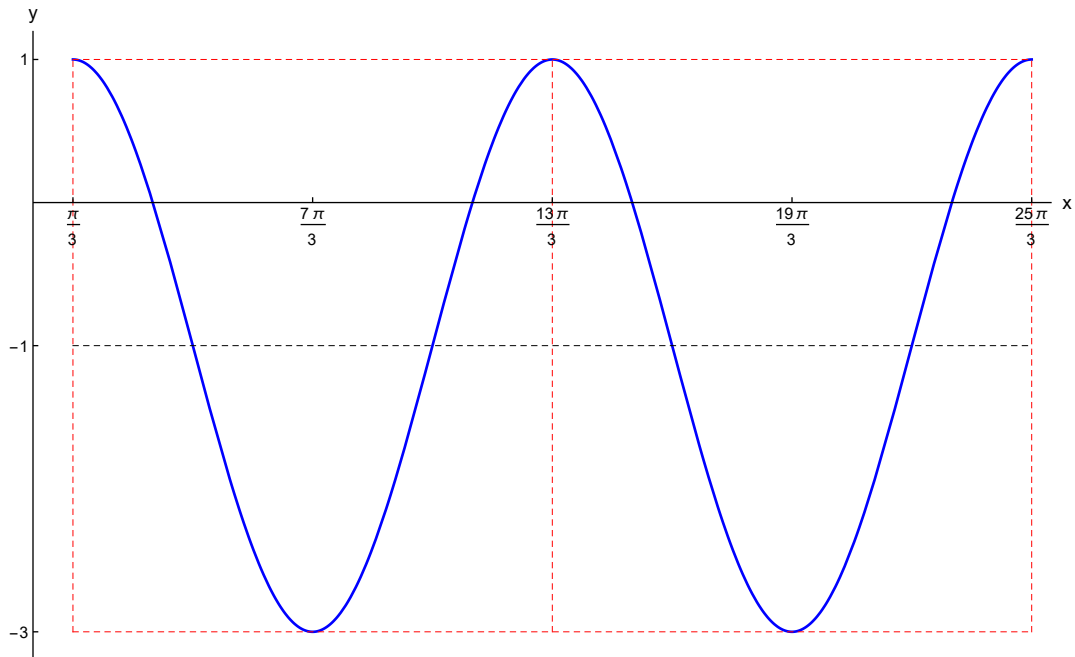


FIGURE 1. Graph of  $y = 2 \cos(1/2x - \pi/6) - 1$  over two periods.