# Math 1613 - Trigonometry

**Quiz #12 - 2018.10.01**

**Solutions**

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Sketch the graph of the function $y = -\frac{1}{2}\sin(3x - \pi/4) + 2$ over two periods. Be sure to compute amplitude and period.

First, we find a single period by solving the inequality $0 \leq 3x - \frac{\pi}{4} \leq 2\pi$ gives $\frac{\pi}{12} \leq x \leq \frac{3\pi}{4}$. The amplitude is $\frac{1}{2}$, and the graph of sin is flipped about the line $y = 2$.

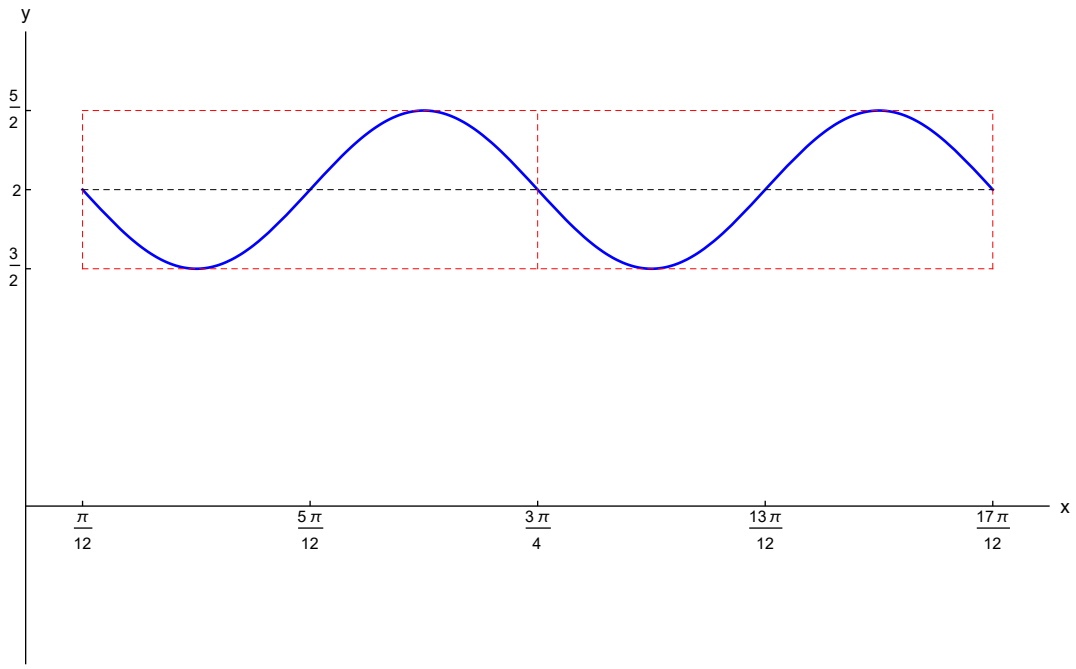


FIGURE 1. Graph of $y = -\frac{1}{2}\sin(3x - \pi/4) + 2$ over two periods.