

# Math 1613 - Trigonometry

## Quiz #10 - 2011.09.20

### Solutions

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1. State the period and amplitudes of  $\tan(x)$  and  $\cot(x)$ .

Both  $\tan(x)$  and  $\cot(x)$  have period  $\pi$ , with  $\tan(x)$  having principle period  $(-\frac{\pi}{2}, \frac{\pi}{2})$  and  $\cot(x)$  on  $(0, \pi)$ . Neither  $\tan(x)$  nor  $\cot(x)$  has an amplitude.

2. Find the period and amplitude of the function  $f(x) = \frac{2}{3} \sin(2x - \frac{\pi}{4}) + 2$ .

The amplitude is the coefficient in front of  $\sin$  and is thus  $\frac{2}{3}$ , and the period is  $\frac{2\pi}{2} = \pi$ .