

### MAT130 HW3

*Each problem is worth 2 points*

**Problem 6 from 3.1** What are the x intercepts for the graph of  $\sin x$  over the interval  $-2\pi \leq x \leq 2\pi$  ?

**Problem 16 from 3.1** Make a sketch of  $y = \cos x$  for  $-2\pi \leq x \leq 2\pi$ .

**Problem 4 from 3.2** State the amplitude and period for  $y = -3 \cos x$ . Graph it for  $0 \leq x \leq 4\pi$ .

**Problem 12 from 3.2** State the amplitude and period for  $y = 3 \cos 2x$ . Graph it for  $-\pi \leq x \leq \pi$ .

**Problem 4 from 3.3** Find the phase shift for  $y = \cos(x - \frac{\pi}{2})$ . Graph it for  $\frac{\pi}{2} \leq x \leq \frac{5\pi}{2}$ .