### 3.1 Video Worksheet

Name: $\qquad$
1.) ( 3 pts.) Graph $\sin x$ from $-4 \pi$ to $4 \pi$. (Start by completing the table for $\sin x$ from $-2 \pi$ to $2 \pi$.)

| $\theta$ | $-2 \pi$ | $-\frac{3 \pi}{2}$ | $\pi$ | $-\frac{\pi}{2}$ | 0 | $\frac{\pi}{2}$ | $\pi$ | $\frac{3 \pi}{2}$ | $2 \pi$ |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\sin \theta$ |  |  |  |  |  |  |  |  |  |
| $(\theta, \sin \theta)$ |  |  |  |  |  |  |  |  |  |

2.) (1 pt.) What is the period of the sine function? (Reference pg. 109 and/or pg.124-126 of the text.)
3.) (1 pt.) What is the domain and range of the graph of $\sin x$ ?
4.) ( 3 pts .) Graph $\cos x$ from $-4 \pi$ to $4 \pi$. (Start by completing the table for $\cos x$ from $-2 \pi$ to $2 \pi$.)

| $\theta$ | $-2 \pi$ | $-\frac{3 \pi}{2}$ | $\pi$ | $-\frac{\pi}{2}$ | 0 | $\frac{\pi}{2}$ | $\pi$ | $\frac{3 \pi}{2}$ | $2 \pi$ |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\cos \theta$ |  |  |  |  |  |  |  |  |  |
| $(\theta, \cos \theta)$ |  |  |  |  |  |  |  |  |  |

5.) (1 pt.) What is the period of the cosine function? (Reference pg. 109 and/or pg.124-126 of the text.)
6.) (1 pt.) What is the domain and range of the graph of $\cos x$ ?

