

Semester 1 Review: Chapter 4

Key Concepts:

1. The Unit Circle	2. Right Triangle Trig
3. Converting Degrees \rightarrow Radians \rightarrow Degrees	4. Point on a Terminal Side
5. Graphing Sinusoids	

1. The Unit Circle

a. $\sin\left(\frac{2\pi}{3}\right) =$	b. $\tan(300^\circ) =$
c. $\sec\left(\frac{-4\pi}{3}\right) =$	d. $\cos\left(\frac{21\pi}{4}\right) =$
e. $\cot\left(-\frac{9\pi}{2}\right) =$	f. $\csc(-840^\circ) =$
g. $\sin(\theta) = -\frac{\sqrt{3}}{2}$	h. $\cot(\theta) = -1$
i. $\tan(\phi) = \sqrt{3}$	j. $\csc(\alpha) = -2$

2. Right Triangle Trig

a. If $\sin(\theta) = -\frac{3}{5}$, and $\tan(\theta) > 0$, what is $\cos(\theta)$	b. If $\csc(\theta) = \frac{13}{12}$, and $\cot(\theta) < 0$, what is $\sec(\theta)$
c. If $\cos(\theta) = -\frac{4}{7}$, and $\sin(\theta) = x$, what is x	d. If $\sec(\alpha) = \frac{12}{7}$, and $\tan(\theta) = \beta$, what is β

3. Converting Degrees → Radians → Degrees

a. Convert to degrees: $\frac{11\pi}{12}$ radians

b. Convert to radians: 110°

c. Convert to radians: -320°

d. Convert to degrees: $-\frac{17\pi}{36}$ radians

4. Point on a Terminal Side: Solve for all six trig functions of θ .

a. The point $(\sqrt{5}, -4)$ lies on the terminal side of θ .

b. The point $(\sqrt{13}, 2\sqrt{3})$ lies on the terminal side of θ .

5. Graph the Sinusoids

a. $f(x) = 3 \sin(\pi x + 2) - 4$

b. $g(x) = -2 \cos\left(\frac{1}{4}x - \pi\right) + 3$

c. $h(x) = -\frac{2}{3} \sin\left(\frac{\pi}{2}x + 4\right)$