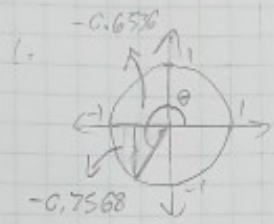
Date . . No.

Justin Chung

1. 

$\theta = 4$

2. $\csc(\omega) = \frac{1}{\sin\theta} = 2\sqrt{2}$

$\sin\omega = \frac{1}{\sqrt{2}} = 45°, 135°$

S | A
T | C

can't be 1st quadrant because $\tan\omega < 0$, thus ω is $135°$ or $\frac{3\pi}{4}$.

$\sec\omega = \frac{1}{\cos\omega} = \frac{1}{\cos\frac{3\pi}{4}} = \frac{1}{-\frac{1}{\sqrt{2}}}$

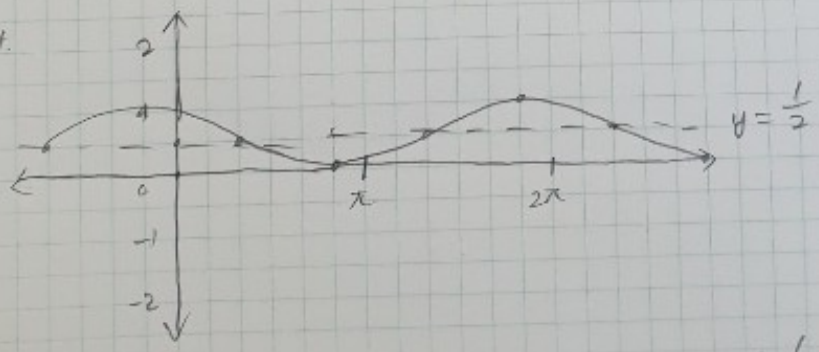
$= -2\sqrt{2}$

3. a $\left(\frac{1}{\cos} - \cos\right)\left(\sin - \frac{1}{\sin}\right) = \left(\frac{1-\cos^2}{\cos}\right)\left(\frac{\sin^2-1}{\sin}\right)$

$= \left(\frac{\sin^2}{\cos}\right)\left(\frac{-\cos^2}{\sin}\right)$

$= \boxed{-\sin\theta\cos\theta = -\frac{1}{2}\sin(2\theta)}$

b. $\frac{\cos - \frac{1}{\cos}}{\frac{\sin}{\cos}} = \frac{\cos^2-1}{\cos} \times \frac{\cos}{\sin} = \frac{-\sin^2}{\sin} = \boxed{-\sin\theta}$

4. 

5. a. $\frac{2\pi}{3} - \left(-\frac{-4\pi}{3}\right) = \frac{6\pi}{3} = 2\pi$

b. $\frac{2.5-(-1.5)}{2} = \frac{4}{2} = 2$

c. $2\sin($