FST Trig 2-5 Extra Practice

Evaluate Exactly by completing the following:

a. Sketch a reference triangle
b. Find the reference angle
c. Find the exact value (No decimals)

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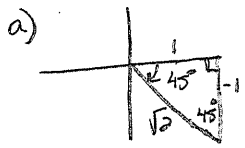
1) $\sin\left(\frac{-\pi}{4}\right)$ $= \frac{-180}{4} = -45°$

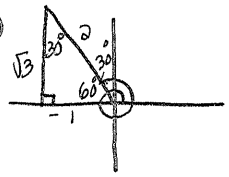
a) 

b) $45°$

c) $\sin -45° = \frac{-1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

$= \boxed{\frac{-\sqrt{2}}{2}}$

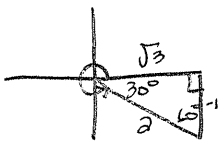
2) $\cos\left(\frac{8\pi}{3}\right)$ $= \frac{8(180)}{3} = 480°$ -360 $120°$

a) 

b) $60°$

c) $\cos 480° = \boxed{\frac{-1}{2}}$

3) $\tan\left(\frac{11\pi}{6}\right) = \frac{11(180)}{6} = 330°$

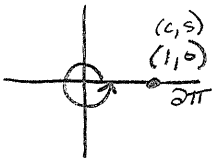
a) 

b) $30°$

c) $\tan 330° = \frac{-1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$= \boxed{\frac{-\sqrt{3}}{3}}$

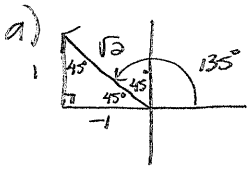
4) $\sec(2\pi) = 360°$

a) 

b) 2π or $360°$

c) $\frac{1}{\cos 2\pi} = \frac{1}{1} = \boxed{1}$

5) $\cot\left(\frac{3\pi}{4}\right)$ $\frac{3(180)}{4} = 135°$

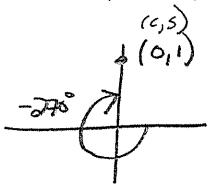
a) 

b) $45°$

c) $\cot 135° = \frac{1}{\tan 135°} = \frac{1}{\frac{1}{-1}}$

$= \boxed{-1}$

6) $\csc\left(\frac{-3\pi}{2}\right)$ $\frac{-3(180)}{2} = -270°$

a) 

b) $-270°$ or $90°$

c) $\csc -270° = \frac{1}{\sin -270°} = \frac{1}{1}$

$= \boxed{1}$