STATIONS ACTIVITY: TRIGONOMETRY

Name: _____

Evaluate the following **without** using a calculator.

1. $\cos 150° =$ $-\frac{\sqrt{3}}{2}$	2. $\sin\frac{5\pi}{3} =$ $-\frac{\sqrt{3}}{2}$	3. $\sin 90° =$ 1
4. $\cos(-120°) =$ $-\frac{1}{2}$	5. $\sin\left(-\frac{2\pi}{3}\right) =$ $-\frac{\sqrt{3}}{2}$	6. $\tan\frac{5\pi}{3} =$ $-\sqrt{3}$

Simplify the following expressions **without** using a calculator.

7. $\frac{\sin^2 x \cot x}{\cos x}$ $\frac{1}{\cos x} \cdot \frac{\sin^2 x}{1} \cdot \frac{\cos x}{\sin x} = \boxed{\sin x}$	8. $\cos x + \sin x \tan x$ $\cos x + \sin x \cdot \frac{\sin x}{\cos x}$ $= \cos x + \frac{\sin^2 x}{\cos x}$ $= \frac{\cos^2 x + \sin^2 x}{\cos x} = \frac{1}{\cos x}$ $= \boxed{\sec x}$	9. $\cos\left(x + \frac{\pi}{2}\right)$ $= \cos x \cos\frac{\pi}{2} - \sin x \sin\frac{\pi}{2}$ $= \cos x (0) - (\sin x)(1)$ $= \boxed{-\sin x}$