1. Determine the **exact** values of the following trig functions:

   • \( \tan \left( \frac{5\pi}{3} \right) \)

   • \( \csc \left( \frac{-7\pi}{4} \right) \)

   • \( \sin \left( \frac{23\pi}{6} \right) \)

   • \( \cos \left( \frac{-11\pi}{2} \right) \)

   • \( \sec(5\pi) \)

2. If the point \((-2,3)\) is on the terminal side of the angle \(\alpha\) (in standard position), what are the **exact** values of \(\sin \alpha\), \(\sec \alpha\) and \(\tan \alpha\)?
3. Find the **exact** values for the following trig functions of $\theta$, given $\tan \theta = -\sqrt{15}$.

(Hint: You may want to use reference triangles and/or trig identities.)

- $\sec \theta$
- $\sin(-\theta)$
- $\tan\left(\frac{\pi}{2} - \theta\right)$

4. Use trig identities, including the Complementary Angle Theorem, to find the **exact** value of:

$$\tan(75^\circ) = \frac{\cos(15^\circ)}{\sin(-15^\circ)} - 4(\sin^2(70^\circ) + \sin^2(20^\circ))$$

Show all intermediate steps. *No decimal approximations should be used anywhere in your work.*