Trigonometry with Triangles

While working in a group make sure you:

- Expect to make mistakes but be sure to reflect/learn from them!
- Are civil and are aware of your impact on others.
- Assume and engage with the strongest argument while assuming best intent.
- 1. Given the triangle to the right, find the remaining side lengths.



- 2. Consider the triangle to the right.
 - (a) Find $\tan(u)$.
 - (b) Find $\sin(u)$.



- (c) Estimate u.
- 3. Let $\cos(\theta) = \frac{2}{3}$.
 - (a) Find $\tan(\theta)$.
 - (b) Find the exact value of $\sec(\theta) + \sin(\theta)$

4. A block is sliding down a frictionless ramp with angle of inclination of 30°, how fast is the block accelerating in the horizontal direction?

5. A plane is flying at an elevation of 21,000 ft. It is within sight of the airport and the pilot finds that the angle of depression to the airport is 22°. What is the distance between the plane and the airport?