# Vector QUIZ

1. **Addition in Bracket Notation:** Given and , find .

1. **Subtraction in Notation:** If and , find .
2. **Addition in 3D:** Given and , find .
3. **Subtraction in 3D Notation:** If and , find .
4. **Combining Operations with 3 Terms:** Given , , and , find .
5. **Magnitude in 2D:** Find the magnitude of .
6. **Unit Vector in 2D:** Find a unit vector in the direction of .
7. **Unit Vector in 3D:** Determine a unit vector in the direction of .
8. **Direction of a Vector:** Given , find the direction of in radians.
9. **Dot and Cross Product** Given and ,
   1. Find the dot product
   2. Find the cross product
   3. Are these vectors, perpendicular, parallel or neither?

**Bonus**: Find a vector perpendicular to and which has a length of 5.