

VII. Discussion Questions

1. Given the magnitude of vector **A**, and one of its components, A_x , what equation is required to calculate the value of the other component, A_y ?

$$A_y = \sqrt{A^2 - A_x^2}$$

2. Given the magnitude of vector **B**, and angle θ_B , what equations are required to determine components B_x and B_y ?

$$B_x = B \cos \theta_B \quad \text{and} \quad B_y = B \sin \theta_B$$

3. Given A_x and R_x what equation is required to determine B_x ?

$$B_x = R_x - A_x$$

4. Given B_y and R_y what equation is required to determine A_y ?

$$A_y = R_y - B_y$$

5. Given A_y and angle θ_A for **A**, what equation is required to determine A_x ?

$$A_x = \frac{A_y}{\tan \theta_A}$$