$$B = \sqrt{B_x^2 + B_y^2} = \sqrt{(-3.0)^2 + (5.0)^2} = 5.8$$

$$\theta_B = \arctan\left(\frac{B_y}{B_x}\right) = \arctan\left(\frac{5.0}{-3.0}\right) = 121^\circ$$ note that $\vec{B}$ is in 2ND quadrant

$$C_x = C\cos\theta_C = 8.0\cos(30^\circ) = 6.9$$

$$C_y = C\sin\theta_C = 8.0\sin(30^\circ) = 4.0$$

$\vec{E} = \vec{A} - \vec{B}$ so $E_x = A_x - B_x = 6.0 - (-3.0) = 9.0$

and

$$E_y = A_y - B_y = -8.0 - 5.0 = -13$$

$$E = \sqrt{E_x^2 + E_y^2} = \sqrt{(9.0)^2 + (-13)^2} = 15.8$$

$$\theta_E = \arctan\left(\frac{E_y}{E_x}\right) = \arctan\left(\frac{-13}{9.0}\right) = -55.3^\circ \text{ wrt } +x\text{-axis}$$