

Special Problem 2-4.16

Say we know that:

$$\mathbf{B} = 2 \hat{\mathbf{a}}_y$$

$$\mathbf{C} = 3 \hat{\mathbf{a}}_y - \hat{\mathbf{a}}_z$$

$$\mathbf{A} \cdot \mathbf{B} = 4$$

$$\mathbf{C} \cdot \mathbf{A} = 5$$

$$|\mathbf{A}| = 3$$

$$\mathbf{A} \cdot \hat{\mathbf{a}}_x < 0$$

Determine vector \mathbf{A} , expressed in terms of Cartesian base vectors $\hat{\mathbf{a}}_x, \hat{\mathbf{a}}_y, \hat{\mathbf{a}}_z$.