## Special Problem 2-4.11

Consider a vector **A**, written in terms of orthonormal base vectors

$$\mathbf{A} = 2\,\hat{i} - 2\,\hat{j} + \sqrt{2}\,\hat{k}$$

**Rewrite** vector **A** in terms of a **new** set of orthonormal base vectors  $\hat{a}, \hat{b}, \hat{c}$ , where the **angles** between the two sets of base vectors are given in the table below:

$ \hat{a} = 60^{\circ} = 120^{\circ} = 135^{\circ} = \hat{k} + \hat{b} = 60^{\circ} = 120^{\circ} = 45^{\circ} = 45^{\circ} = 60^{\circ} = 135^{\circ} = 135^{\circ} = 90^{\circ} = 60^{\circ} = 135^{\circ} = 135^{\circ} = 90^{\circ} = 135^{\circ} = $		î	ĵ	ƙ	For example:
45	â	60°	120°	135°	<i>k</i> ∧
	ĥ	60°	120°	45°	45°
	ĉ	135°	135°	90°	