Special Problem 2-4.14

Consider a vector **A**, written in terms of orthonormal base vectors $\hat{a}, \hat{b}, \hat{c}$:

$$\mathbf{A} = 2\,\hat{a} - 2\sqrt{2}\,\hat{c}$$

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

For example:
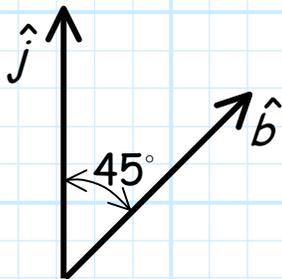
	$\hat{i}$	$\hat{j}$	$\hat{k}$
$\hat{a}$	60°	135°	120°
$\hat{b}$	60°	45°	120°
$\hat{c}$	135°	90°	135°