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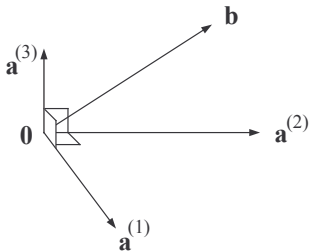
Note: $\|\mathbf{a}\| > 0$ unless $\mathbf{a} = \mathbf{0}$

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$$\mathbf{Ax} = \mathbf{b} \quad \Leftrightarrow \quad x_1\mathbf{a}^{(1)} + x_2\mathbf{a}^{(2)} + x_3\mathbf{a}^{(3)} = \mathbf{b}$$

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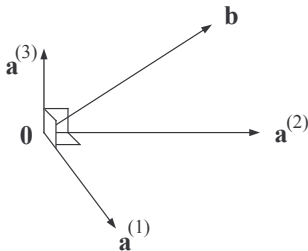
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Orthogonality of $\mathbf{a}^{(1)}$, $\mathbf{a}^{(2)}$ and $\mathbf{a}^{(3)}$ \Rightarrow $\mathbf{b} =$ sum of its projections onto $\mathbf{a}^{(1)}$, $\mathbf{a}^{(2)}$ and $\mathbf{a}^{(3)}$

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$$(\forall k) \quad c_k = \frac{\langle \mathbf{v}^{(k)}, \mathbf{s} \rangle}{\|\mathbf{v}^{(k)}\|^2}$$