

Another Factorization

Look now at the result of Gram-Schmidt in another way:

$$a = (q_1, a)q_1 + 0q_2 + 0q_3 = Q \begin{bmatrix} (q_1, a) \\ 0 \\ 0 \end{bmatrix}$$

$$b = (q_1, b)q_1 + (q_2, b)q_2 + 0q_3 = Q \begin{bmatrix} (q_1, b) \\ (q_2, b) \\ 0 \end{bmatrix}$$

$$c = (q_1, c)q_1 + (q_2, c)q_2 + (q_3, c)q_3 = Q \begin{bmatrix} (q_1, c) \\ (q_2, c) \\ (q_3, c) \end{bmatrix}$$