

7.6.1, 7.6.2

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I. Given $P = (a, b, c)$, $P' = (a', b', c') \in S^2$. Explain how to calculate a quaternion that represents a rotation transforming P to P' .

Apply this process to find quaternions that represent the rotations transforming

(i) $(1, 0, 0)$ to $(\frac{1}{3}, \frac{2}{3}, \frac{2}{3})$

(ii) $(\frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}})$ to $(\frac{1}{3}, \frac{2}{3}, \frac{2}{3})$

II. Find (48) quaternions representing rotations of the cube

