1. Derive the relationship between a rotation matrix $R$ (i.e., $R \in SO(3)$ and the following representations (in both directions). If there are multiple solutions, find all of them.

(a) Equivalent axis/angle ($k$, $q$)
(b) Unit quaternion (or Euler Parameters), ($q_o$, $q$)
(c) Vector quaternion, $q$
(d) Gibb's vector (or Euler-Rodrigues Parameters), $b$
(e) Euler angles (3-2-1, or roll-pitch-yaw)

2. Find at least one other representation mentioned in the literature.