Next, let $G1$ be the Klein 4-group $<a> \times <b>$. Here, $QG_1 \sim Q \times Q \times Q \times Q$, and the (central) idempotents giving this decomposition are determined again from the irreducible characters:

$e_1 = (1 + a + b + ab)/4$,
$e_2 = (1 + a - b - ab)/4$,
$e_3 = (1 - a + b - ab)/4$,
$e_4 = (1 - a - b + ab)/4$.

Finally, let G_2 be the quaternion group $\{1, i, j, k, \varepsilon, \varepsilon i, \varepsilon j, \varepsilon k\}$. Since there is an irreducible QG_2-module given by the rational quaternions H_0, and four 1-dimensional QG_2-modules, we have $QG_2 \sim Q \times Q \times Q \times Q \times H_0$. For the corresponding central idempotents, we can first construct the ones associated with the linear characters:

$e_1 = (1 + \varepsilon + i + \varepsilon i + j + \varepsilon j + k + \varepsilon k)/8$,
$e_2 = (1 + \varepsilon - i - \varepsilon i + j + \varepsilon j - k - \varepsilon k)/8$,
$e_3 = (1 + \varepsilon + i + \varepsilon i - j - \varepsilon j - k - \varepsilon k)/8$,
$e_4 = (1 + \varepsilon - i - \varepsilon i - j - \varepsilon j + k + \varepsilon k)/8$.

The last central idempotent can then be obtained as:

$e_5 = 1 - e_1 - e_2 - e_3 - e_4 = (1 - \varepsilon)/2$.