| $r$ | $I_r$ | $M$ after applying $I_r$ |
|---|---|---|
| 1 | $m_3 \leftarrow m_2 * m_1$ | $M = [g, h, hg]$ |
| 2 | $m_3 \leftarrow m_3^{-1}$ | $M = [g, h, g^{-1}h^{-1}]$ |
| 3 | $m_3 \leftarrow m_3 * m_1$ | $M = [g, h, g^{-1}h^{-1}g]$ |
| 4 | $m_3 \leftarrow m_3 * m_2$ | $M = [g, h, g^{-1}h^{-1}gh]$ |