∴群でない.

任意の$a \in \boldsymbol{Q}$に対して, $e = a$とすると, (G2)を満たす.

また, $a \in \boldsymbol{Q}$の逆元はa.

問3. 5

(1)

$|1| = 1$.

$2^1 = 2, 2^2 = 4, 2^3 = 1$より, $|2| = 3$.

$3^1 = 3, 3^2 = 2, 3^3 = 6, 3^4 = 3^3 \times 3 = 4, 3^5 = 3^4 \times 3 = 12 = 5, 3^6 = 3^5 \times 3 = 15 = 1$より, $|3| = 6$.

$4^1 = 4, 4^2 = 2, 4^3 = 1$より, $|4| = 3$.

$5^1 = 5, 5^2 = 4, 5^3 = 6, 5^4 = 5^3 \times 5 = 30 = 2, 5^5 = 5^4 \times 5 = 10 = 3, 5^6 = 5^5 \times 5 = 15 = 1$より, $|5| = 6$.

$6^1 = 6, 6^2 = 1$より, $|6| = 2$.

(2)

(1)より, $a = 3, 5$.