Math 4400 Group theory worksheet

 $D_6 = \{$ symmetries of the triangle $\} = \{I, R, T, a, b, c\},$ where



Complete the following "multiplication table" for D_6 . Multiply on the left by the element of D_6 corresponding to the row and multiply on the right by the element corresponding to the column. For instance, the cell in row "a" and column "R" should contain the element aR = b

| | I | R | $\mid T$ | a | b | c |
|---|---|---|----------|---|---|---|
| Ι | Ι | R | T | a | b | С |
| R | R | | | | | |
| T | T | | | | | |
| a | a | b | | | | |
| b | b | | | | | |
| С | c | | | | | |