

| URB | D (LUB) | E (UBL) | F (BLU) | URB |
|---------|-----------|---------|---------|---------|
| A (FUL) | UR D | UR | U'UR | A (FUL) |
| B (ULF) | U'R'D' | R(DU) | U2RD | B (ULF) |
| C (LFU) | [L':URU'] | UR' | U2R | C (LFU) |

| URB | J (RUF) | K (UFR) | L (FRU) | URB |
|---------|---------|----------|------------|---------|
| A (FUL) | U'R' | R | [ULU', R'] | A (FUL) |
| B (ULF) | U'R'D' | UR'(D'U) | RD | B (ULF) |
| C (LFU) | U'I'UR | R' | R'D' | C (LFU) |
| D (LUB) | UR D | R | [R, U'L'U] | D (LUB) |
| E (UBL) | UR | U'R(DU) | UR' | E (UBL) |
| F (BLU) | I'UR | R' | R'D' | F (BLU) |

| URB | M (FDL) | N (DLF) | O (LFD) | URB | P (LDB) | Q (DBL) | R (BLD) | URB | S (BDR) | T (DRB) | U (RBD) | URB | V (RDF) | W (DFR) | Z (FRD) | URB |
|---------|---------|-----------|--------------|---------|-----------|------------|------------|---------|-------------|---------|---------|---------|---------|-------------|----------|---------|
| A (FUL) | RD | (UD')R | U2R' | A (FUL) | RD2 | UR | D'R | A (FUL) | URU | (UD)R | R | A (FUL) | RU' | U'R' | DR | A (FUL) |
| B (ULF) | (DU) | DR'DR | U | B (ULF) | | R'D'R(D'U) | (DU) | B (ULF) | D | D'R'DR | | B (ULF) | U | R'DR | (UD') | B (ULF) |
| C (LFU) | DR'D' | R' | R'D | C (LFU) | U'R | DR' | R'U' | C (LFU) | (U'D)R | U2R | U'RU | C (LFU) | UR' | D'R' | R'U' | C (LFU) |
| D (LUB) | D'R U | (UD')R U' | UR'U | D (LUB) | [URU', L] | URU' | D'R U | D (LUB) | [R', U'L'U] | R'UR | RU | D (LUB) | RU | [R2: U'L'U] | DRU | D (LUB) |
| E (UBL) | D' | RDR' | U | E (UBL) | | DRDR' | D' | E (UBL) | D | D'R'DR | | E (UBL) | U | R'DR | D | E (UBL) |
| F (BLU) | DR'D' | R' | R'(D'U) | F (BLU) | U2R | DR' | R'U' | F (BLU) | ID | D2R' | DR'U' | F (BLU) | R'(D'U) | D'R' | R'U' | F (BLU) |
| J (RUF) | URU | UD'R | U'R' | J (RUF) | U'R'U | UR | (U'D)R' | J (RUF) | (U'D)R'U | (UD)R | UR(D'U) | J (RUF) | (D'U)RU | U'R'(DU) | (U'D')R' | J (RUF) |
| K (UFR) | D | U'RDR' | | K (UFR) | | (U'D)RD'R' | D' | K (UFR) | D | URD'R' | | K (UFR) | | U'R'DR | D' | K (UFR) |
| L (FRU) | D'R U' | R'U | [R', U'L'U'] | L (FRU) | RU' | (U'D)RU | [U'L U, R] | L (FRU) | DRU' | U'RU | RU' | L (FRU) | UR'U' | D'R'U | R'U | L (FRU) |

| UBR | P (LDB) | Q (DBL) | R (BLD) | UBR | S (BDR) | T (DRB) | U (RBD) | UBR | V (RDF) | W (DFR) | Z (FRD) | UBR |
|---------|---------|-------------|-----------|-----------|---------|---------|---------|---------|----------|-----------|---------|---------|
| M (FDL) | UD | (DU)RD | DR'D' | M (FDL) | (UD) | (UD)R | D'RD' | M (FDL) | U | U'R' | RD' | M (FDL) |
| N (DLF) | (U'D)R' | DR'UR | D'R'D | N (DLF) | RDR' | URU'R' | R' | N (DLF) | URD | R'UR | R'(UD) | N (DLF) |
| O (LFD) | DRD | DR'(UD') | D' | O (LFD) | U'R'U | D2R' | | O (LFD) | R'D | R'DR | D | O (LFD) |
| P (LDB) | | U' | (U'D')R'D | URD' | | | | P (LDB) | RU' | U'R' | RD' | P (LDB) |
| Q (DBL) | | UR(U'D') | URU'R' | R'D' | | | | Q (DBL) | UR | R'UR | DR' | Q (DBL) |
| R (BLD) | | [R', U'L U] | R'UR | | | | | R (BLD) | RD' | D'R' | D' | R (BLD) |
| S (BDR) | | | U | U'R'D | | | | S (BDR) | U | U'R'D | D'R'D' | S (BDR) |
| T (DRB) | | | (U'D')R' | D'R'UR | | | | T (DRB) | (U'D')R' | D'R'UR | DR'D | T (DRB) |
| U (RBD) | | | R'D' | D'R'(UD') | | | | U (RBD) | R'D' | D'R'(UD') | | U (RBD) |