TWO + TWO = FOUR.

Step ①

→ Each letter is diff (0-9)

→ No leading zero: T≠0, F≠0

→ TWO + TWO means 2 X TWO = FOUR

Step ② Look at F

→ Since we are doubling a 3-digit no and getting a 4-digit number, F must be 1 (the only digit that can appear in the thousands place from a carry)

Step ③ - Last column (O+O = R)

O+O might give a carry

→ If O+O is less than 10 ⟶ R = 2XO, no carry

→ If O+O is 10 (or) more ⟶ R = (2XO) mod 10 and we have a carry of 1

Step ④: work backwards

→ Try 0 values that make all digits different and satisfy addition rules.

→ we find: T=7, W=3, O=4, F=1, U=6, R=8

Step ⑤: check

$$\begin{array}{r} TWO = 734 \\ +\ TWO = 734 \\ \hline FOUR = 1468 \end{array}$$ ✓