

All The Digits 1412124

Rule 1#: can't use 3

Rule 2#: 4 digit has
3 consecutive

Rule 3#: 3rd digit is
2nd + 1st \rightarrow 4-digit number

Rule 4#: 1st, 3rd, 5th consecutive
5 digit \rightarrow 2nd, 4th consecutive

$$\begin{array}{r} 5694 \\ \star \star \star \star \\ \times \quad \quad \quad 3 \\ \hline \star \star \star \star \star \\ 17082 \end{array}$$

Trial 1#: 0,1,2,3,4,5,6,7,8,9

$$\begin{array}{r} 4596 \\ \times \quad \quad \quad 3 \\ \hline 13788 \times \end{array}$$

Trial 2#:

Trial 2#:

$$\begin{array}{r} 5694 \\ \times \quad \quad \quad 3 \\ \hline 17082 \checkmark \checkmark \checkmark \end{array}$$

Explanation: This is the correct equation

because it fills all the criteria and rules.

The 4,5 and 6 are the only possible

combinations. This is because 0,1 and 2

cannot be it, because $0+1=1$, which will happen

with all the other combinations. Therefore,

meaning that 4,5 and 6 are the only possible

combinations. After this $4+5=9$, so the fourth

number has to be 9. In conclusion, 5694

is the number, which proves $5694 \times 3 = 17,028$