

## Trebling

A favourite of mine for multiplication working in a systematic way you work.

$$\begin{array}{r} 1 \ a \ b \ c \ d \ e \\ \times \phantom{00000} 3 \\ \hline a \ b \ c \ d \ e \ 1 \end{array}$$

$$\begin{array}{r} 2 \ f \ g \ h \ i \ j \\ \times \phantom{00000} 3 \\ \hline f \ g \ h \ i \ j \ 2 \end{array}$$

### **TASK:**

**Can you replace the letters with numbers?**

**Is there only one solution in each case?**

Below to see how two different pupils began working on the task.

Tom: "I wrote out single digit multiples of three up to 9 because each letter was one digit. I noticed that the numbers 1 to 9 only appeared once in the ones column of the answers. I looked at the question and realised that  $3 \times e$  had to be 21 because it was the only answer ending in 1. This meant that e had to be 7.

I carried the 2 and took it from 7 (the other e) and got 5. So  $d \times 3$  had to end in 5 which meant d had to be 5 because  $5 \times 3 = 15$ . I then repeated the process."

Lucy: "For each problem I first looked to find a number that would make the ones column accurate, then I substituted the number for the answer in the tens column and then continued the process until the calculation was complete."