

***** **Mathematical Weekly** *****
(week eleven)

Some other simple yet interesting number patterns:

$$\begin{aligned}987654321 \times 9 \times 1 &= 0\ 888888888\ 9 \\987654321 \times 9 \times 2 &= 1\ 777777777\ 8 \\987654321 \times 9 \times 3 &= 2\ 666666666\ 7 \\987654321 \times 9 \times 4 &= 3\ 555555555\ 6 \\987654321 \times 9 \times 5 &= 4\ 444444444\ 5 \\987654321 \times 9 \times 6 &= 5\ 333333333\ 4 \\987654321 \times 9 \times 7 &= 6\ 222222222\ 3 \\987654321 \times 9 \times 8 &= 7\ 111111111\ 2 \\987654321 \times 9 \times 9 &= 8\ 000000000\ 1\end{aligned}$$

$$\begin{aligned}12345679 \times 9 \times 1 &= 111111111 \\12345679 \times 9 \times 2 &= 222222222 \\12345679 \times 9 \times 3 &= 333333333 \\12345679 \times 9 \times 4 &= 444444444 \\12345679 \times 9 \times 5 &= 555555555 \\12345679 \times 9 \times 6 &= 666666666 \\12345679 \times 9 \times 7 &= 777777777 \\12345679 \times 9 \times 8 &= 888888888 \\12345679 \times 9 \times 9 &= 999999999\end{aligned}$$

$$\begin{aligned}1 \times 7 \times 15873 &= 111111 \\2 \times 7 \times 15873 &= 222222 \\3 \times 7 \times 15873 &= 333333 \\4 \times 7 \times 15873 &= 444444 \\5 \times 7 \times 15873 &= 555555 \\6 \times 7 \times 15873 &= 666666 \\7 \times 7 \times 15873 &= 777777 \\8 \times 7 \times 15873 &= 888888 \\9 \times 7 \times 15873 &= 999999\end{aligned}$$