

Multiplicative Reasoning Name:

16×20 is the same as $16 \times 2 \times 10$

So, we double 16 which is 32 and then multiply by 10 = 320

Our working might look like

$$\begin{array}{rcl}
 16 \times 20 & & 16 \times 20 = 320 \\
 16 \times 2 \times 10 & & 10 \times 20 + 6 \times 20 \\
 (10 \times 2) + (6 \times 2) & & \\
 20 + 12 = 32 & & 200 + 120 \\
 32 \times 10 = 320 & &
 \end{array}$$

NOTE

If the expression has 2 zeros i.e. 150×20 - 12×200 - 6×200

Then the product has 2 zeros 300 2400 1200

If the expression has 3 zeros i.e. 200×20 - 12×2000 - 60×200

Then the product has 2 zeros 4000 24000 12000

$$\begin{array}{lll}
 13 \times 10 = & 12 \times 10 = & 12 \times 38 = \\
 16 \times 1000 = & 18 \times 1000 = & (\underline{\quad} \times 38) + (\underline{\quad} \times 38) \\
 13 \times 100 = & 21 \times 100 = & 2 \times 30 = 2 \times 8 = \\
 15 \times 10 = & 22 \times 10 = & \underline{\quad} + \underline{\quad} \\
 24 \times 20 = & 31 \times 20 = & 12 \times 26 = \\
 31 \times 200 = & 41 \times 200 = & (\underline{\quad} \times 26) + (\underline{\quad} \times 26) \\
 410 \times 20 = & 50 \times 200 = & 2 \times 20 = 2 \times 6 = \\
 400 \times 20 = & 500 \times 20 = & \underline{\quad} + \underline{\quad} \\
 150 \times 20 = & 50 \times 20 = &
 \end{array}$$