

Multiplication Strategies

Standard Algorithm

$$\begin{array}{r}
 21 \\
 42 \\
 453 \\
 \times 48 \\
 \hline
 3624 \\
 + 18120 \\
 \hline
 21,744
 \end{array}$$

Partial Products

$$\begin{array}{r}
 453 \\
 \times 48 \\
 \hline
 24 \\
 400 \\
 3,200 \\
 120 \\
 2,000 \\
 \hline
 16,000 \\
 \hline
 21,744
 \end{array}$$

8×3
8×50
8×400
40×3
40×50
40×400

Area Model

$$139 \times 4 =$$

	100	30	9
4	100 x 4 400	30 x 4 120	9 x 4 36

Add

400
120
+ 36
556

$$3 \cdot 2 = 6$$

↑ ↑ ↑

These are the **factors** of 6. This is the **product**.

Multiples of 3:
~~0~~, 3, 6, 9, ~~12~~, 15, 18, 21, ~~24~~, ...

Multiples of 4:
~~0~~, 4, 8, ~~12~~, 16, 20, ~~24~~, 28, ...

The LCM of 3 and 4 is 12.