

Title Multiply multi-digit numbers (NBT.5)

Videos <https://www.youtube.com/watch?v=OMqP7aeTszM> (English)
<https://www.youtube.com/watch?v=x-lxfrgxhjI> (English)
<https://www.youtube.com/watch?v=jNZJVfLVlwg> (Spanish)

Anchor Chart

Multiplication Strategies

Example: 6×182

Area Model

	100	+ 80	+ 2
6	6×100 = 600	6×80 = 480	6×2 = 12

$600 + 480 + 12 = 1,092$

Distributive Property

$$6 \times 182 = 6 \times (100 + 80 + 2)$$
$$= (6 \times 100) + (6 \times 80) + (6 \times 2)$$
$$= 600 + 480 + 12$$
$$= 1,092$$

Partial Products

$$\begin{array}{r} 182 \\ \times 6 \\ \hline 600 \\ 480 \\ + 12 \\ \hline 1,092 \end{array}$$

$600 \leftarrow 6 \times 1 \text{ hundred}$
 $480 \leftarrow 6 \times 8 \text{ tens}$
 $+ 12 \leftarrow 6 \times 2 \text{ ones}$

Standard Algorithm

$$\begin{array}{r} 4 \ 1 \\ 182 \\ \times 6 \\ \hline 1,092 \end{array}$$

Start in the ONES place

$6 \times 2 = 12$
 $6 \times 8 = 48 + 1 = 49$
 $6 \times 1 = 6 + 4 = 10$

MENTAL MATH