

Steps to Success for Box Array/Area Model

$$\underline{523} \times \underline{46}$$

1. Draw a rectangle
2. Write first factor in expanded form ABOVE rectangle stretching all the way across.
3. Write second factor in expanded form on LEFT side of rectangle stretching all the way down.
4. Draw lines across and down where I see "+" signs.
5. Multiply top value by side value in each box (use finger drag method).
6. Add partial products.

$500 + 20 + 3$

\times	500	$+$	20	$+$	3
40	\times	500	\times	46	20000
	$+$	500	\times	46	800
	$+$	500	\times	6	3000
	$+$	20	\times	46	920
	$+$	20	\times	6	120
	$+$	3	\times	46	138
	$+$	3	\times	6	18
	$+$	$23,000$	$+$	920	138

Rewrite

$$\begin{array}{r} \oplus \\ 23,000 \\ \quad 920 \\ + \quad 138 \\ \hline 24,058 \end{array}$$

Final Product →

Practice

group

$$2,472 \times 56$$

$$2000 + 400 + 70 + 2$$

56	<u>2000</u> × <u>50</u> 100,000	<u>400</u> × <u>50</u> 20,000	<u>70</u> × <u>50</u> 3,500	<u>2</u> × <u>50</u> 100
	<u>2000</u> × <u>6</u> 12,000	<u>400</u> × <u>6</u> 2,400	<u>70</u> × <u>6</u> 420	<u>2</u> × <u>6</u> 12
	112,000	22,400	3,920	112

$$\begin{array}{r} 112,000 \\ 22,400 \\ 3,920 \\ + 112 \\ \hline 138,432 \end{array}$$

on own

$$38 \times 94$$

$$30 + 8$$

96	<u>90</u> × <u>30</u> 2700	<u>90</u> × <u>8</u> 720
	<u>30</u> × <u>4</u> 120	<u>8</u> × <u>4</u> 32
	2820	752

$$\begin{array}{r} 2820 \\ + 752 \\ \hline 3,572 \end{array}$$