

Name \_\_\_\_\_

Date \_\_\_\_\_

# THREE WAYS TO MULTIPLY

Here are three strategies you can use to multiply multi-digit factors.  
For each strategy, look at the example problem on the left.  
Then, try it on the right!

	<b>23 x 14</b>	<b>45 x 13</b>																			
<b>BASE TEN ARRAY</b>	● = 1     = 10   □ = 100																				
	$23 \times 14$  $200 + 110 + 12 = 322$ $23 \times 14 = 322$																				
<b>AREA MODEL</b>	$23 \times 14$ $(20 + 3) \times (10 + 4)$																				
	$20 + 3$ <table style="border-collapse: collapse; margin-left: 20px;"> <tr> <td style="padding-right: 10px;">10</td> <td style="border: 1px dashed black; padding: 5px;"><math>10 \times 20</math> 200</td> <td style="border: 1px dashed black; padding: 5px;"><math>10 \times 3</math> 30</td> <td style="padding-left: 10px;">200</td> </tr> <tr> <td style="padding-right: 10px;">+</td> <td></td> <td></td> <td style="padding-left: 10px;">30</td> </tr> <tr> <td style="padding-right: 10px;">4</td> <td style="border: 1px dashed black; padding: 5px;"><math>4 \times 20</math> 80</td> <td style="border: 1px dashed black; padding: 5px;"><math>4 \times 3</math> 12</td> <td style="padding-left: 10px;">80</td> </tr> <tr> <td></td> <td></td> <td></td> <td style="padding-left: 10px;"><u>+12</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td style="padding-left: 10px;">322</td> </tr> </table> $23 \times 14 = 322$	10	$10 \times 20$ 200	$10 \times 3$ 30	200	+			30	4	$4 \times 20$ 80	$4 \times 3$ 12	80				<u>+12</u>				322
10	$10 \times 20$ 200	$10 \times 3$ 30	200																		
+			30																		
4	$4 \times 20$ 80	$4 \times 3$ 12	80																		
			<u>+12</u>																		
			322																		
<b>PARTIAL PRODUCTS</b>	$\begin{array}{r} 23 \\ \times 14 \\ \hline 12 \text{ ..... } (4 \times 3) \\ 80 \text{ ..... } (4 \times 20) \\ 30 \text{ ..... } (10 \times 3) \\ + 200 \text{ ..... } (10 \times 20) \\ \hline 322 \end{array}$																				