Multiplication and Division Strategies
4th Grade

Multiplication:

Area Model – 23 x 36 = _____
- Set up your area box and break numbers apart
- Multiply numbers – remember basic facts and add zeros as needed
- When finished add all four numbers together

	20	+	3	
30	600		90	690
6	120		18	138 828

Array Model:

Draw an array area model to illustrate 74 x 38.

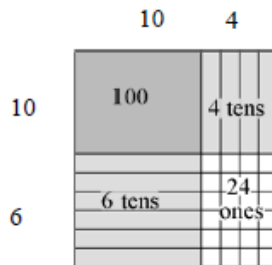|	70	4
30	70 x 30 = 2,100	4 x 30 = 120
8	70 x 8 = 560	4 x 8 = 32

2,100 + 560 + 120 + 32 = 2,812

Base Ten Blocks

- To illustrate 154 x 6 students use base 10 blocks or use drawings to show 154 six times. Seeing 154 six times will lead them to understand the distributive property, 154 X 6 = (100 + 50 + 4) x 6 = (100 x 6) + (50 X 6) + (4 X 6) = 600 + 300 + 24 = 924.
- The area model shows the partial products.

14 x 16 = 224

100 + 40 + 60 + 24 = 224
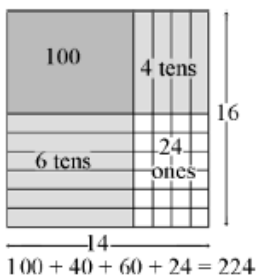
Or

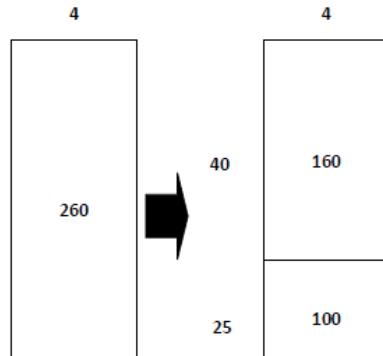Using the area model, students first verbalize their understanding:
- 10 x 10 is 100
- 4 x 10 is 40
- 10 x 6 is 60, and
- 4 x 6 is 24.

They use different strategies to record this type of thinking.

Division

Open Array

260 ÷ 4 = _____

Students make a rectangle and write 4 on one of its sides. They express their understanding that they need to think of the rectangle as representing a total of 260.

1. Students think, 4 times what number is a number close to 260? They recognize that 4 x 40 is 160 so they record 40 as a factor and partition the rectangle into 2 rectangles and label the area aligned to the factor of 40 with 160. They express that they have only used 160 of the 260 so they have 100 left.
2. Knowing that 4 x 25 is 100. They write 100 in the bottom area of the rectangle and record 25 as a factor.

3. Students express their calculations in various ways:
a. 260 260÷ 4 = 40 + 25

-160 (4 x 40) = 65
100
-100 (4 x 25)
0

Using Partial Products: