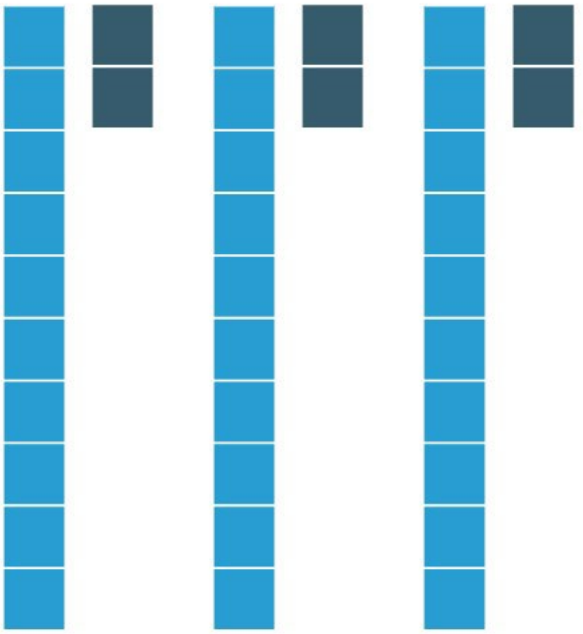
Multiplication Strategy

Repeated Addition

3 x 12 =

12+12+12

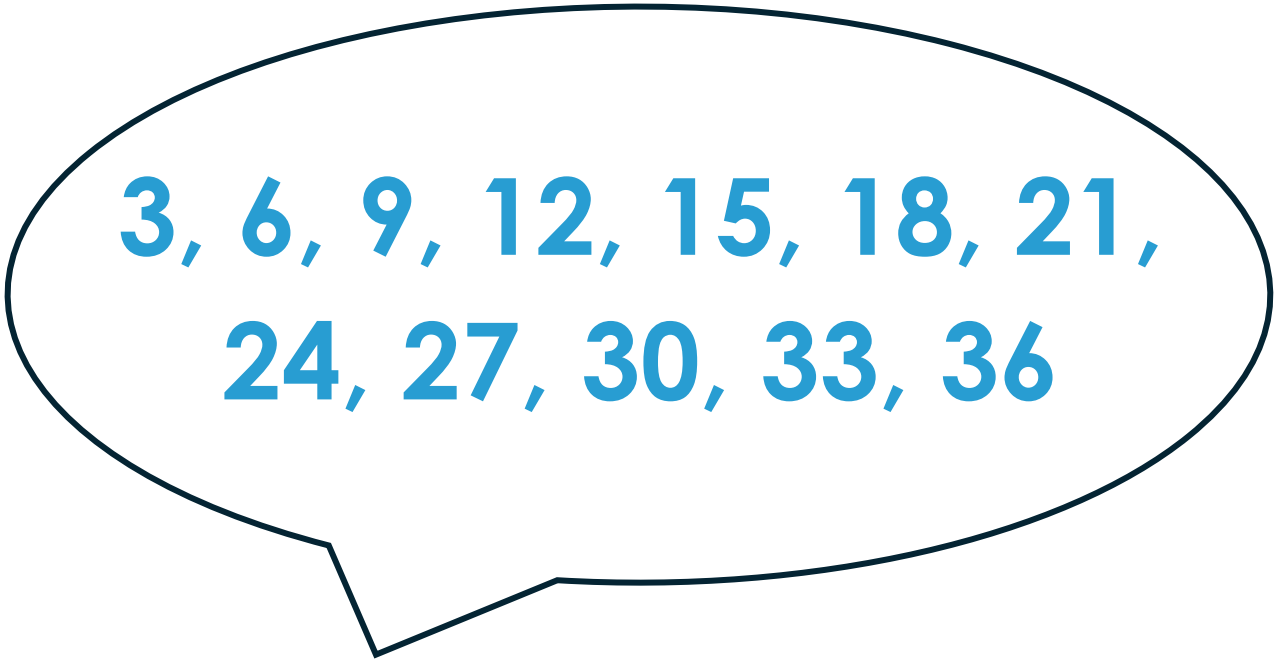


"I know that 3x12 means adding three 12s. Twelve is 10+2 so I added three 10s and three 2s and put the answers together."

Multiplication Strategy

Skip Counting

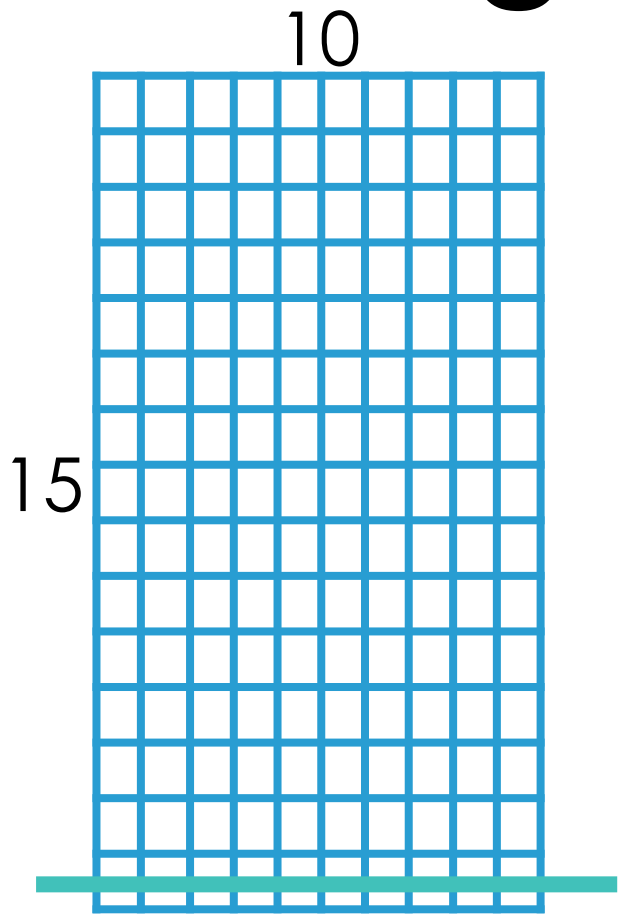
3 x 12 =



"I skip counted and used my fingers to keep track of how many threes I counted."

Multiplication Strategy

Making Friendly Numbers



9 x 15 =

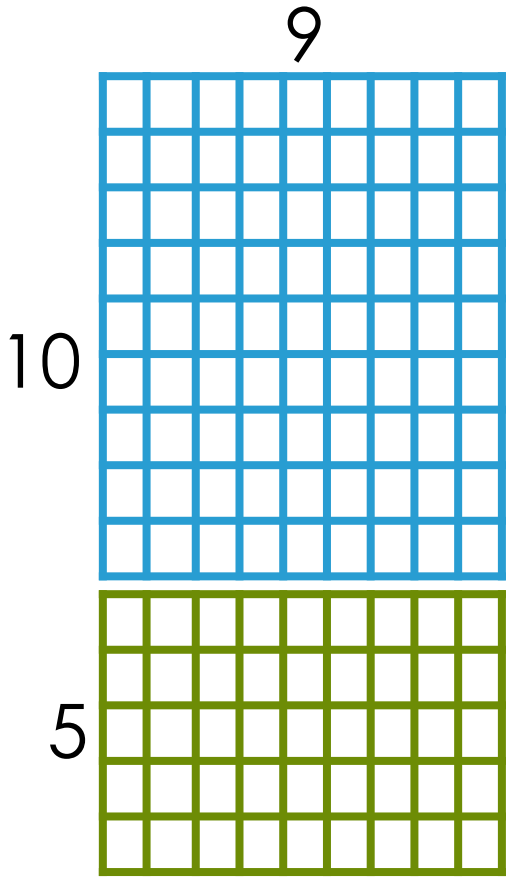
10 x 15=150

150 - 15=135

"I changed the nine to a ten because it is easier to multiply by 10. I took away fifteen from that answer because it was the extra group that I had added.

Multiplication Strategy

Distributive Property



$9 \times 15 = 9 \times (10+5)$

9x10=90

9x5=45

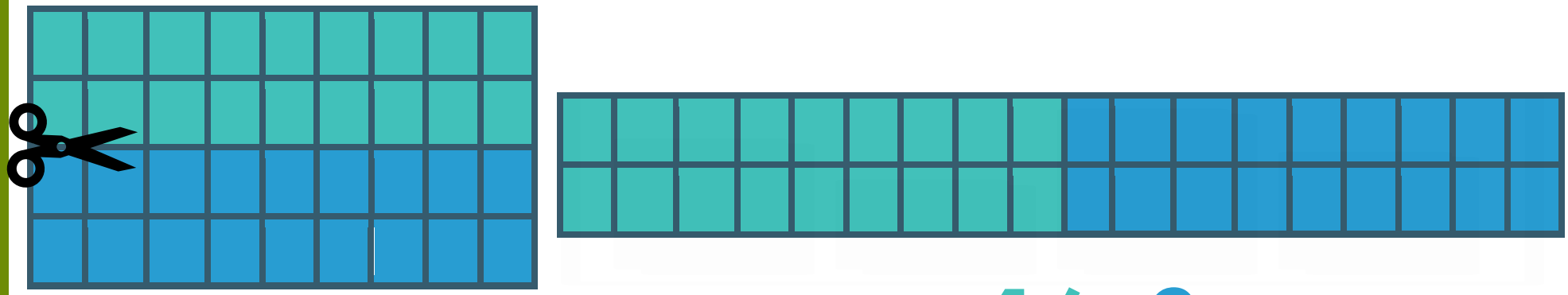
90+45=135

"I broke the fifteen into a ten plus five. Then I multiplied 10 by 9 and 5 times 9. I added those two numbers together."

Multiplication Strategy

Doubling and Halving

8x 4 =



(8x2)x(4÷2) =

=16x2

=32

"I made this a friendly problem by halving one factor and doubling the other until I could solve the equation in my head .

Multiplication Strategy

Associative Property

12 x 25 =

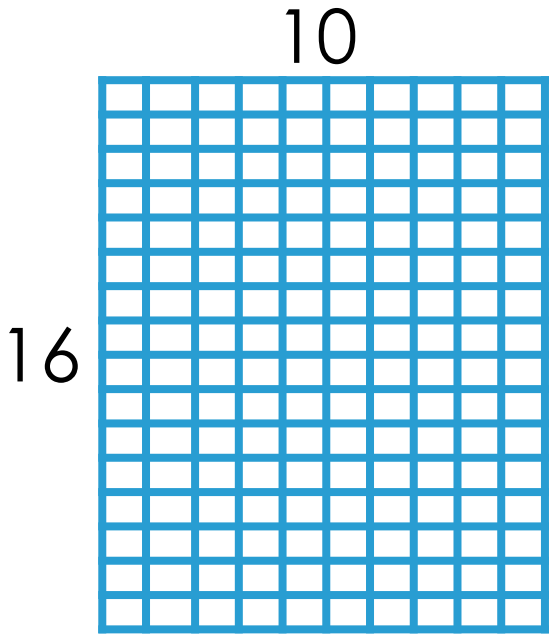
12=3x4

(4x25)+(4x25)+(4x25)=

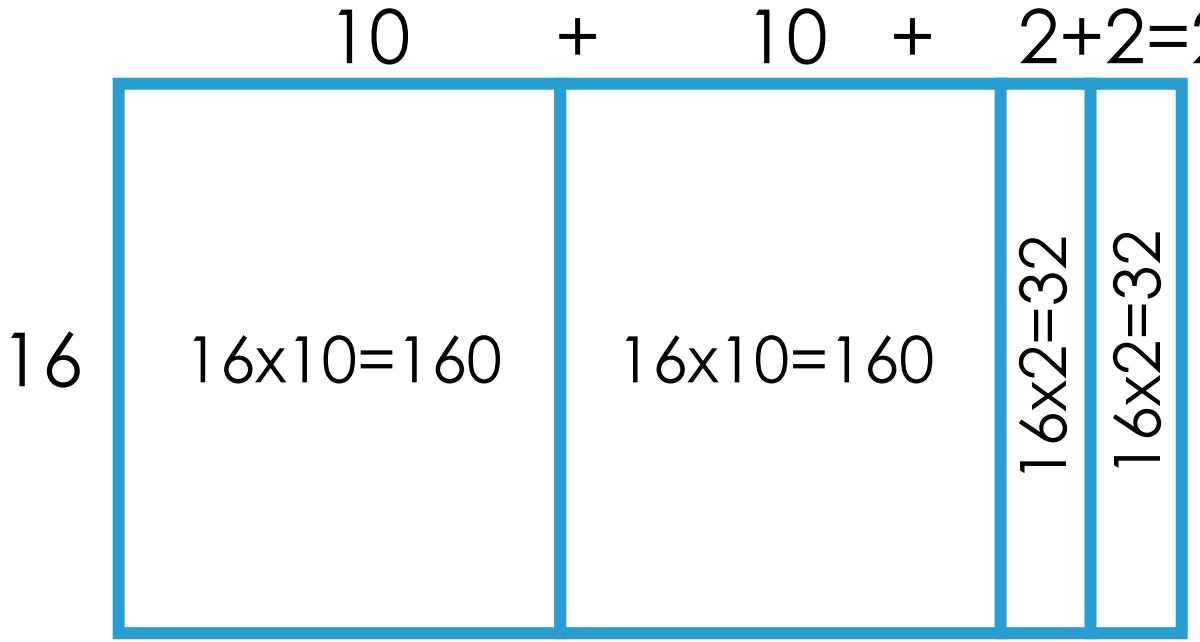
100+100+100=300

"I know that three 4s makes 12 and 4x25=100 so I make three equations and add them together.

Tool Kit



Array



Open Array or Area Model

10 x 16 = 160

Factor Factor Product

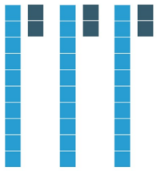
Multiplication Strategies

Multiplication Strategy

Repeated Addition

3 x 12 =

12+12+12



"I know that 3x12 means adding three 12s. Twelve is 10+2 so I added three 10s and three 2s and put the answers together."

This is a beginning strategy for multiplication and is like skip counting It is a beginning strategy that helps students understand the concept of multiplication. More information can be found on page 245 and 265 of "Number Talks: Whole Number Computation" by Sherry Parrish. .

Multiplication Strategy

Skip Counting

3 x 12 =

3+3+3+3+3+3+3+3+3+3+3+3=12

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36

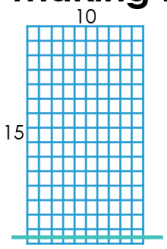
"I skip counted and used my fingers to keep track of how many threes I counted."

This is a beginning strategy for multiplication and is similar to repeated addition. More information can be found on page 245 and 265 of "Number Talks: Whole Number Computation" by Sherry Parrish.

Multiplication Strategy

Making Friendly Numbers

9 x 15 =



10x15=150
150-15=135

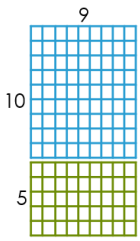
"I changed the nine to a ten because it is easier to multiply by 10. I took away fifteen from that answer because it was the extra group that I had added.

This strategy makes use of changing one of the factors to an easier number. More information can be found on page 247 and 267 of "Number Talks: Whole Number Computation" by Sherry Parrish. Number talks can be found starting on page 269.

Multiplication Strategy

Distributive Property

9 x 15 = 9 x (10+5)



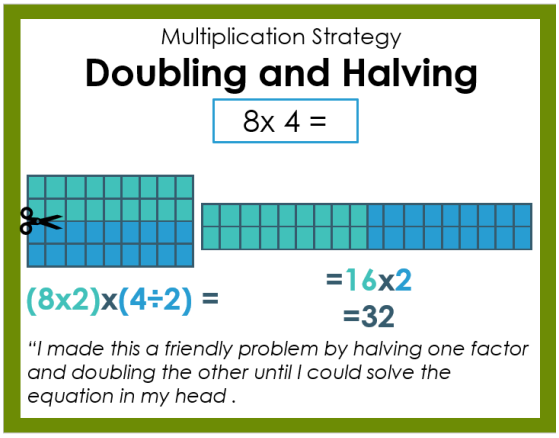
9x10=90

9x5=45 90+45=135

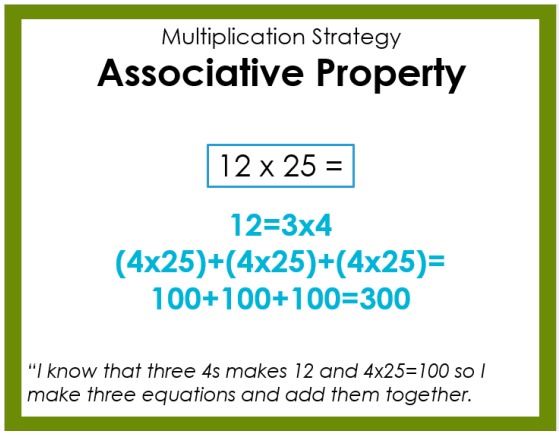
"I broke the fifteen into a ten plus five. Then I multiplied 10 by 9 and 5 times 9. I added those two numbers together."

This distributive property has the students decompose a factor into easier (smaller) numbers to create **partial products**. More information can be found on page 248 and 272 of "Number Talks: Whole Number Computation" by Sherry Parrish. Number talks can be found starting on page 273.

Multiplication Strategies
Page 2



This strategy makes use of changing factors to an easier number by doubling one factor and halving the other. More information can be found on page 250 and 276 of "Number Talks: Whole Number Computation" by Sherry Parrish. Number talks can be found starting on page 278.



This strategy makes use breaking factors into smaller factors to make an easier equation. More information can be found on page 252 and 282 of "Number Talks: Whole Number Computation" by Sherry Parrish. Number talks can be found starting on page 283.