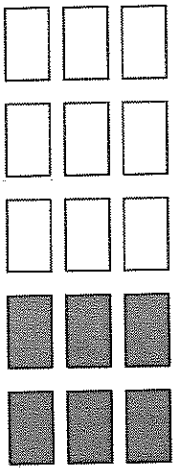
G3-M1-Lesson 9

1. Matt organizes his baseball cards into 3 rows of three. Jenna adds 2 more rows of 3 baseball cards. Complete the equations to describe the total number of baseball cards in the array.



a. $(3 + 3 + 3) + (3 + 3) =$ 15

b. 3 threes + 2 threes = 5 threes

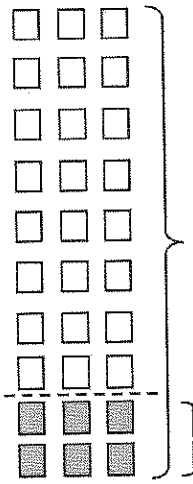
c. 5 × 3 = 15

The multiplication equation for this array is $5 \times 3 = 15$ because there are 5 threes or 5 rows of 3, which is a total of 15 baseball cards.

The total for Matt's baseball cards (the unshaded rectangles) can be represented by $3 + 3 + 3$ because there are 3 rows of 3 baseball cards. The total for Jenna's baseball cards (the shaded rectangles) can be represented by $3 + 3$ because there are 2 rows of 3 baseball cards. This can be represented in unit form with 3 threes +2 threes, which equals 5 threes.

2. $8 \times 3 =$ 24

I can find the product of 8×3 using the array and the equations below. This problem is different than the problem above because now I am finding two products and subtracting instead of adding.



$10 \times 3 =$ 30

$2 \times 3 =$ 6

The multiplication equation for the whole array is $10 \times 3 = 30$. The multiplication equation for the shaded part is $2 \times 3 = 6$.

30 − 6 = 24

8 × 3 = 24

To solve 8×3, I can think of 10×3 because that's an easier fact. I can subtract the product of 2×3 from the product of 10×3. $30 - 6 = 24$, so $8 \times 3 = 24$.