

# *Unit 2 Module 2 Session 5*

## *Problem String- The Watertown Post Office*

### *Problems and Investigations-The Watertown Post Office Mailboxes*

Getting Ready-

- <sup>TM</sup> T7 Post Office Mailboxes
- SB 54 More Post Office Mailboxes
- Student Math Journals
- As needed-markers, glue or tape, scissors
- <sup>TM</sup> T8 Work Place Guide 2C Cover Up
- <sup>TM</sup> T9 2C Cover Up Record Sheet
- SB 55 Work Place Instructions 2C Cover Up

# VOCABULARY

Equation

Variable

Array



- Solve story problems that call for finding the area of a figure that can be decomposed into non-overlapping rectangles
- Solve for the unknown (variable) in a multiplication equation involving 3 whole numbers
- Use constructive criticism when reasoning with others

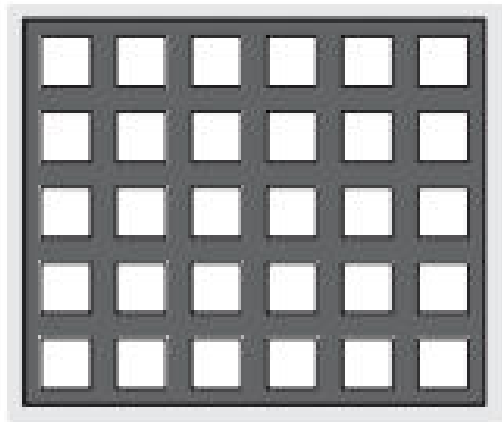
Wanda is Wally's wife. Wanda manages the Watertown Post Office. One of Wanda's jobs is to sort the mail into everybody's mailbox at the Post Office. She needs help figuring out the number of mailboxes.

**JOURNALS  
PLEASE**



Problem String: The Watertown Post Office  
Today's Date

Write an equation in your journal to match the mailboxes.



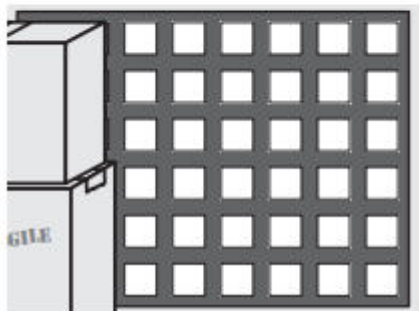
Sample Strategies

Write an equation in your journal to match the mailboxes.



Sample Strategies

Write an equation in your journal to match the mailboxes.



The one with the bag is 4-by-6. That means there are two 4-by-3 arrays put together. 4 times 3 is 12 and two of those makes 24.

$$4 \times 6 = (4 \times 3) + (4 \times 3) = \\ 12 + 12 = 24$$

The next one is an 8-by-6. That's like two of the 4-by-6s put together. So we just doubled to find the total. 48.

$$8 \times 6 = (4 \times 6) + (4 \times 6) = \\ 24 + 24 = 48$$

The 8-by-6 is like the 6-by-6 with two more 6s added to it. So I added 12 to 36 to get 48.

$$8 \times 6 = (6 \times 6) + (2 \times 6) = \\ 36 + 12 = 48$$



Help Wally figure out how many mailboxes there are on this wall. Use numbers, sketches, or words to show your thinking. Mark your answer clearly.

## MAILBOXES

What do you notice about the picture?

What relationships can you see that would help solve the problem?





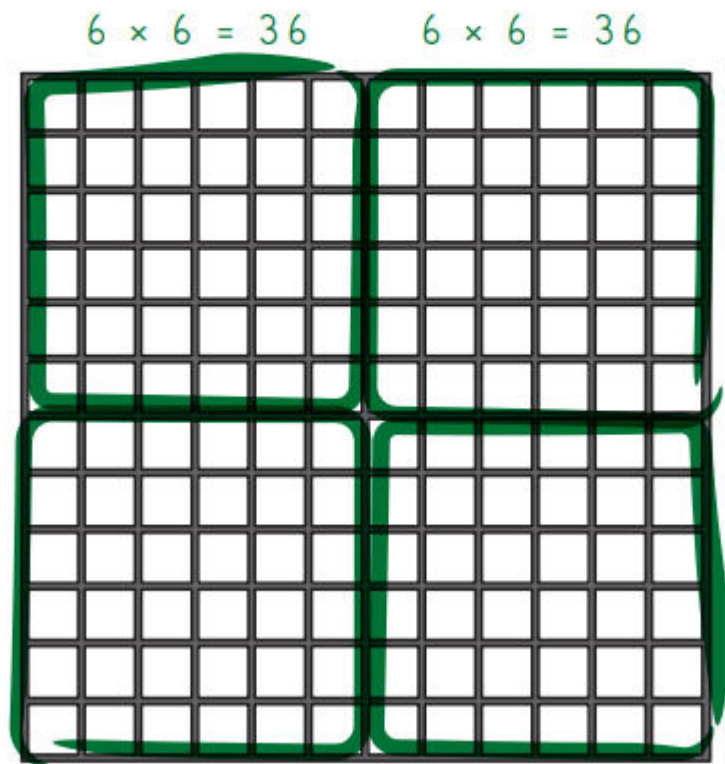
Help Wally figure out how many mailboxes there are on this wall. Use numbers, sketches, or words to show your thinking. Mark your answer clearly.

## MAILBOXES

A 10x10 grid of squares, totaling 100 squares. The grid is composed of 10 rows and 10 columns of squares, each square being 10 units wide and 10 units high. The grid is empty, with no numbers or other markings.

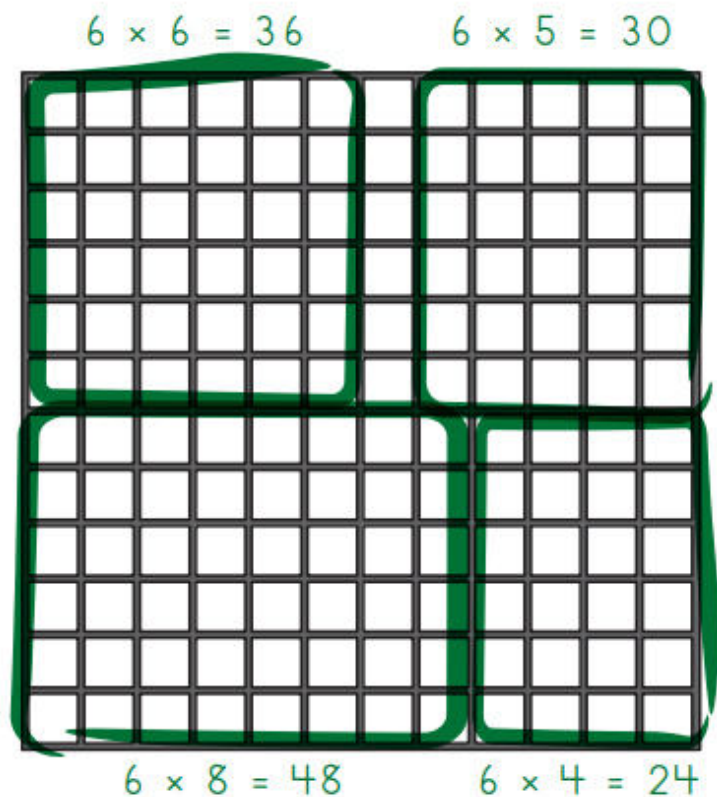
## Using Four 6-by-6 Arrays

Students identify four 6-by-6 arrays in the 12-by-12 array. They add 36 four times for a total of 144.

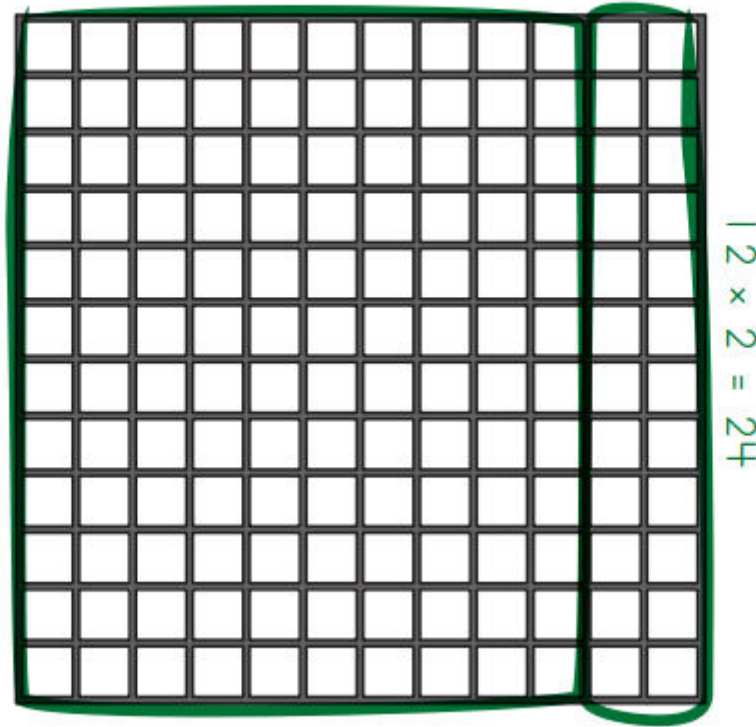


## Using Familiar Arrays

Students identify the four arrays they already worked with, find the total of their products, and then add the 6 remaining mailboxes.



$$12 \times 10 = 120$$



$$12 \times 2 = 24$$

Would counting all the squares by 1's be an efficient way of finding the total?

# ***Work Places***

Introduce 2C Cover Up

™ T8 Work Place Guide

™ T9 Record sheet

SB 55 Instructions



Work Place Link

# ***Work Places***

1F Rabbit Tracks

1G Target One Hundred

1H Anything But Five

2A Loops and Groups

2B Frog Jump Multiplication

2C Cover Up

# *Daily Practice*

SB 56 Watertown Center