Factors, Multiples, and Primes

You may use calculators, multiplication tables, or square-inch tiles to solve the following problems.

1. Danny made a rectangle with 40 tiles. If there were 5 rows, how many tiles were in each row? Draw a picture of this rectangle.

2. A. Is it possible to make a rectangle with 6 rows using 30 tiles? Why or why not?

B. Is it possible to make a rectangle with 4 rows using 30 tiles? Why or why not?

3. A. Is 28 a multiple of 4? Show or tell how you know.

B. Is 28 a multiple of 5? Show or tell how you know.

4. Is 28 a prime number? Show or tell how you know.

5. Is 31 a multiple of 5? Show or tell how you know.

6. Is 31 a prime number? Show or tell how you know.

7. Joe Smart is having trouble remembering 9 × 5. Show Joe how to solve 9 × 5 using the break-apart method.
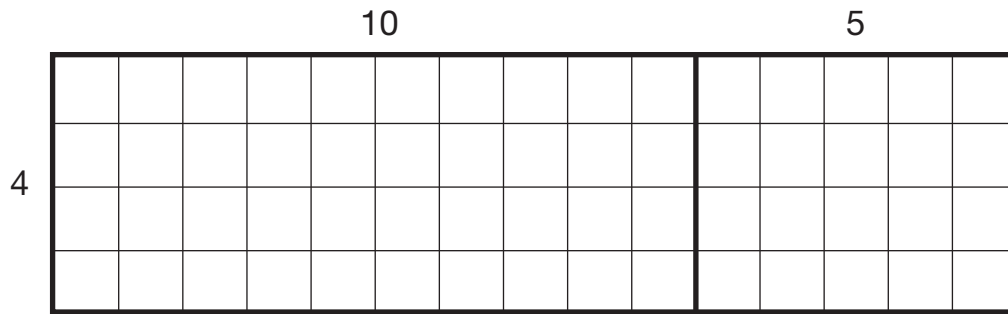
    A. Break the rectangle into parts to make it easier to multiply.

    B. Write number sentences on each part to show the number of squares in each.

    C. Write a number sentence to show the total number of squares in the large rectangle.
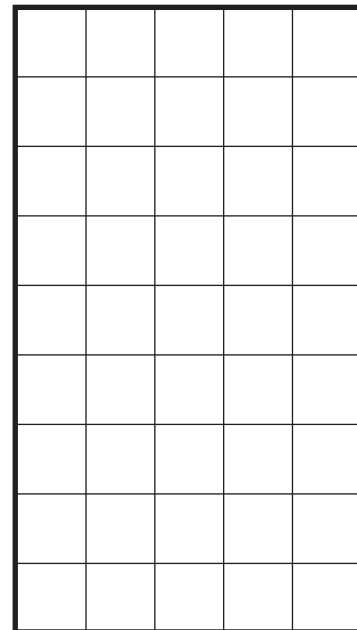
8. Jacob drew the rectangle below and broke it into parts.

A. What multiplication problem does Jacob's rectangle represent?

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B. Complete Jacob's problem using the break-apart method. Write number sentences to show your work.

Factors, Multiples, and Primes Feedback Box	Expectation	Check In	Comments
Use arrays to solve multiplication and division problems. [Q# 1–2]	E1		
Decide whether one number is a multiple of another. [Q# 3 and 5]	E2		
Find the factors of a number. [Q# 2–6]	E3		
Decide whether a number is prime. [Q# 4 and 6]	E4		
Use break-apart products to solve a math facts problem. [Q# 7]	E9		
Use break-apart products to solve multiplication problems with larger numbers. [Q# 8]	E9		