Solving Multiplication Problems

Check-In: Questions 1–4

Solve the following problems. You may use the *Half-Centimeter Grid Paper* that follows Question 4.

1. Solve 39 × 24 using the rectangle method and the expanded-form method. Draw lines connecting the matching partial products in the two methods. For example, if you have a partial product of 200 in both methods, draw a line connecting the 200 in the rectangle with the 200 in the expanded-form.

rectangle method

expanded-form method

Name _____   Date _____

2. Linda solved 52 × 24 using expanded form:

$$
\begin{array}{r}
52 \;=\; 50 + 2 \\
|\!\times\!| \\
\underline{\times\ 24} \;=\; \underline{20 + 4} \\
100 \;\longleftarrow\; 50 \times 20 \\
200 \;\longleftarrow\; 50 \times\ \ 4 \\
40 \;\longleftarrow\;\ \ 2 \times 20 \\
\underline{+\ 8} \;\longleftarrow\;\ \ 2 \times\ \ 4 \\
348
\end{array}
$$

A. Check Linda's answer by solving 52 × 24 using the rectangle method.

B. What mistake did Linda make in solving the problem? Use your rectangle to help explain your answer.

Name _____   Date _____

3. Show or tell how you solve each of the following problems. Solve one problem using expanded form, solve one problem using a rectangle, and solve one problem using mental math.

    A. 31×54 **B.** 25×30 **C.** 29×15

4. Show or tell how you know your answer to Question 3A is reasonable.

Solving Multiplication Problems Check-In: Q# 1–4 Feedback Box	Expectation	Check In	Comments
Show understanding of place value concepts by breaking factors into tens and ones and then multiply the partial products. [Q# 1]	E1		
Show connections between using rectangles and expanded form. [Q# 1–2]	E2		
Estimate products of multidigit numbers using multiples of ten and convenient numbers. [Q# 4]	E3		
Use the rectangle method and expanded form to multiply 2-digit numbers. [Q# 1–3]	E4		
Choose appropriately from among paper and-pencil methods and mental math to multiply multidigit numbers. [Q# 3]	E6		