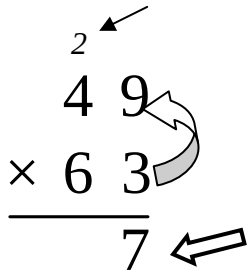
Name:_____ Date: _____

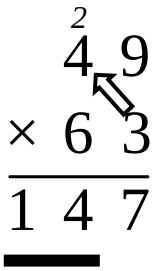
2×2 Multiplication: Stage II Traditional (Criss-Cross)

STEP 1



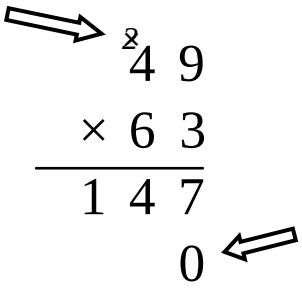
- ✓ This starts like the 2×1 or 3×1 multiplication. Multiply bottom-right times top-right.
- ✓ When you get the answer, put the 1's digit underneath and the 10's digit on top.
  (In this case, 9 × 3 = 27, so the 7 goes below and the 2 goes on top, to be carried.)

STEP 2



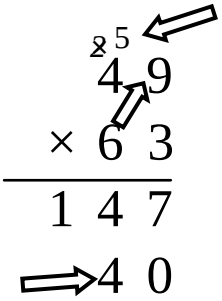
- ✓ Multiply bottom-right by top-left. (4 × 3 = 12)
- ✓ If there's a number to carry, you add it now. You have a 2 to carry from Step 1, so add that. (12 + 2 = 14)
- ✓ Because you're done with this line of the problem, put the whole answer (14) on the bottom.

STEP 3



- ✓ Cross out the number you carried in Step 1. You're done with it and you don't want it to confuse you in the rest of the problem.
- ✓ Below the first line of your answer, insert a zero This will be a place holder, since we are now going to be multiplying from the 10's place.

STEP 4



- ✓ Multiply bottom-left (6) by top-right (9). (6 × 9 = 54)
- ✓ Just like in Step 1, put the 1's digit (4) on the bottom, on the second line, next to the zero. Put the 10's digit (5) on top for carrying in the next step.

STEP 5

$$\begin{array}{r} {\scriptstyle 2\,\overset{5}{\cancel{4}}} \\ 49 \\ \times\ 63 \\ \hline 147 \\ 2940 \\ \hline \end{array}$$

- ✓ Multiply bottom-left (6) by top-left (4). (6 × 4 = 24)
- ✓ Add the 5, which was carried in Step 4. (24 + 5 = 29)
- ✓ Because you're done multiplying, put the whole answer (29) on the bottom.

STEP 6

$$\begin{array}{r} {\scriptstyle 2\,\overset{5}{\cancel{4}}} \\ 63 \\ \times\ 49 \\ \hline 147 \\ +\ 2940 \\ \hline 3087 \end{array} \quad \Leftarrow \quad \Leftarrow$$

- ✓ Draw a line and then add up the columns in the two rows.
- ✓ You're done!

You MUST show your work! If you used scratch paper, please attach it to your homework when you turn it in.

(1)

$$\begin{array}{r} 63 \\ \times\ 9 \\ \hline \end{array}$$

(2)

$$\begin{array}{r} 63 \\ \times\ 49 \\ \hline \_\_\ \_\_\ \_\_ \\ +\ \_\_\ \_\_\ \_\_\ 0 \\ \hline \end{array}$$

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(3)

$$\begin{array}{r} 45 \\ \times\ 36 \\ \hline \_\_\ \_\_\ \_\_ \\ +\ \_\_\ \_\_\ \_\_\ 0 \\ \hline \end{array}$$

(4)

$$\begin{array}{r} 76 \\ \times\ 50 \\ \hline \_\_\ \_\_ \\ +\ \_\_\ \_\_\ \_\_\ 0 \\ \hline \end{array}$$

(5)

$$\begin{array}{r} 37 \\ \times\ 94 \\ \hline \_\_\ \_\_\ \_\_ \\ +\ \_\_\ \_\_\ \_\_\ 0 \\ \hline \end{array}$$

(6)

$$\begin{array}{r} 97 \\ \times\ 85 \\ \hline \\ +\ \qquad\qquad 0 \\ \hline \end{array}$$

Now, try these last two with the number spots completely removed. Try to solve them. If you need to draw them in yourself, then that's OK!

(7)

$$\begin{array}{r} 12 \\ \times\ 39 \\ \hline \end{array}$$

(8)

$$\begin{array}{r} 88 \\ \times\ 24 \\ \hline \end{array}$$