Name Record

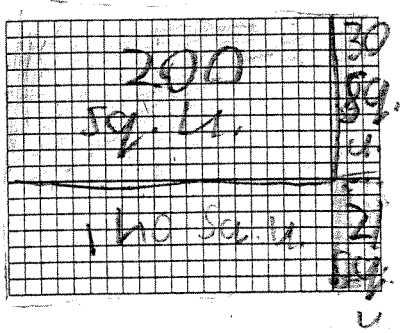
3rd Grade

Using Arrays to Multiply

P 6-3

Use the grid to draw a rectangle. Then complete the calculation.

1.



$$\begin{array}{r} 23 \\ \times\ 17 \\ \hline 21 \\ 140 \\ 30 \\ +\ 200 \\ \hline 391 \end{array}$$

expanded algorithm

2.

$$\begin{array}{r} 31 \\ \times\ 19 \\ \hline 9 \\ 270 \\ 10 \\ +\ 300 \\ \hline 589 \end{array}$$

3.

$$\begin{array}{r} 26 \\ \times\ 22 \\ \hline 12 \\ 40 \\ 120 \\ +\ 400 \\ \hline 572 \end{array}$$

4.

$$\begin{array}{r} 33 \\ \times\ 14 \\ \hline 12 \\ 120 \\ 30 \\ +\ 300 \\ \hline 462 \end{array}$$

5. $24 \times 57 =$ 1368

6. $44 \times 48 =$ 2024

7. A red kangaroo can cover 40 ft in 1 jump. How many feet can the red kangaroo cover in 12 jumps? 480

Test Prep

8. Barb exercises for 14 hr in 1 week. How many hours does she exercise in 32 weeks?

   A. 496 hr **B.** 448 hr **C.** 420 hr **D.** 324 hr

9. **Writing in Math** Explain how the product of 16×34 is like the product of 6×34 plus 10×34.

10 pr 6 x 34

only a rule !! Not with !

56 ×39	56 ×39	5 56 ×39 504	1 5 56 ×39 504 168	*thousands hundreds tens ones* 56 ×39 504 +168 2184
	Think: There are 2 digits in bottom number.	Multiply top number by one's place of bottom number. Regroup.	Think: Start next part of answer below ten's column. Do: Multiply top number by ten's place of bottom number. Regroup.	Add ones, tens, hundreds, and thousands.

a.

1 5 56 ×39 504 168 2184	77 ×46 462 308 3,542	59 ×85 295 +4720 5,015	93 ×65 465 5580 6,045	84 ×33 252 +2520 2,772	36 ×98 288 +3240 3,528

b.

63 ×75 315 4410 4,725	67 ×23 201 +1340 1,541	26 ×56 156 +1300 1,456	83 ×84 332 +6640 6,972	39 ×67 273 +2340 2,613	69 ×24 276 +1380 1,656

c.

47 ×65 235 +2820 3,055	98 ×79 882 +6860 7,742	27 ×87 189 +2160 2,349	34 ×48 272 +1360 1,632	52 ×65 260 +3120 3,380	78 ×59 702 +3900 4,602