## Multiplying Multi-Digit Numbers

Complete the multiplication sentences after splitting and completing an area model or completing a puzzle.
(1)

$39 \times 52=$ $\qquad$
(3)

$54 \times 76=$ $\qquad$
(2)

$61 \times 48=$ $\qquad$
$\times$

$82 \times 44=$ $\qquad$

## Test Prep

(5) Which fraction represents the shaded part?

(6) Which fraction represents the shaded part?

A. $\frac{2}{3}$
B. $\frac{2}{5}$
C. $\frac{2}{8}$
D. $\frac{1}{3}$

## Writing Vertical Records

(1) Fill in the puzzle. Then complete the multiplication records.


Write the partial products on the area models. Then complete the multiplication records.


## Test Prep

(4) Write a word problem that can be represented by the number sentence $19 \times 36=?$ ? Then solve your problem.
$\qquad$
$\qquad$

## Writing Shorter Records

(1) Complete the puzzle and record.

(2) Complete the area model. Then complete the puzzle and record.


## Test Prep

(3) Which of the following is NOT equal to $86 \times 24$ ?
A. $(80 \times 24)+(6 \times 24)$
B. $(80 \times 6)+(20 \times 4)$
C. $(20 \times 86)+(4 \times 86)$
D. $(24 \times 6)+(24 \times 80)$
(4) Which will NOT produce the same result as $81 \times 69$ ?
A. $69 \times 81$
B. $(80+1) \times(9+60)$
C. $(60+9)+(80+1)$
D. $(81 \times 60)+(81 \times 9)$

## Using Square Number Differences

Complete the tables.
1

| $a$ | 7 | 9 |  | 40 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $a^{2}$ |  |  | 144 |  | 2,500 |

2

| $\boldsymbol{b}$ | 8 |  | 12 | 15 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\boldsymbol{b}^{2}-\mathbf{1}$ |  | 99 |  |  | 899 |

(3)

| $c$ | 4 |  |  |  | 11 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $(c+2) \times(c-2)$ |  | 5 |  | 396 |  |
| $c^{2}-4$ |  |  | 21 |  |  |

## Test Prep

(4) A certain pair of numbers have a sum of 25 and a difference of 9 . The numbers must be:
A. 5,5
B. 17,8
C. 25,9
D. 9,16
(5) The square of one number is added to the square of another number. The sum is 41. The numbers could be:
A. 6,2
C. 5,4
B. 40,1
D. 3, 5

## Multiplying Large Numbers

Complete the area model, puzzle, and record.
(1)


$$
267 \times 48=
$$

$\qquad$

2


## Test Prep

(3) The Gomez family is planning a party at a restaurant. They are inviting 51 adults and 26 children. If the cost is $\$ 49$ per adult and $\$ 24$ per child, how much should they expect to spend on the party? Explain how you found your answer.
$\qquad$
$\qquad$
$\qquad$
$\qquad$

