

Student Guide - Page 219

Name $\qquad$ Date $\qquad$
Picturing Fact Families

1. A. The rectangle to the right represents the following problem: There are 7 rows of squares with 5 squares in each row. What is the total number of squares? Write the mulitiplication sentence for this problem on the top row of the rectangle.
B. The rectangle for Question 1 A also represents this division problem: If a rectangle has a total of 35 squares in 7 rows, how many squares are in each row? Write the division sentence row of the rectangle.
2. A. The rectangle to the right represents the following problem: There are 5 rows of squares with 7 squares in each row. What is the total number of squares?


Write the multiplication sentence for this problem on the top row of the rectangle. Write the number of rows first.
B. The rectangle for Question 2A also represents this division problem: If a rectangle has a total of 35 squares in 5 rows, how many squares are in each row? Write the division sentence for this problem on the bottom row of the rectangle.
3. Cut out the two rectangles and turn one around so that it fits on top of the other. The four number sentences represent the same rectangle. They are called a fact family.

## Student Guide

Homework (SG p. 219)

## Questions 1-6

I. Students practice at home with their Triangle Flash Cards.
2. A. 2,2
B. 9,9
C. 8,8
D. 0,0
E. 4, 4
F. Undefined; there is no number that makes $0 \times \square=7$ true.
3. A. 30
B. 150
C. 15
D. 150
4. A. 200
B. 200
5. A. 350
B. 350
6. A. 450
B. 450

## Student Activity Book

## Picturing Fact Families

## Questions 1-3 (SAB p. 183)

I. A. 35 squares; $7 \times 5=35$
B. 5 squares; $35 \div 7=5$
2. A. 35 squares; $5 \times 7=35$
B. 7 squares; $35 \div 5=7$
3.

|  | $5 \times 7=35$ |  |
| :---: | :---: | :---: |
| n |  | $\stackrel{\rightharpoonup}{*}$ |
| $\stackrel{N}{\sim}$ |  | u |
| n |  | $\sim_{\sim}^{\sim}$ |
|  | $35 \div 5=7$ |  |

## Student Activity Book

## Mixed-up Tables

Questions 1-15 (SAB pp. 187-188)
I.

| $\times$ | 2 | 4 | 8 |
| :---: | :---: | :---: | :---: |
| 2 | 4 | 8 | 16 |
| 4 | 8 | 16 | 32 |
| 8 | 16 | 32 | 64 |

2. 

| $\times$ | 1 | 3 | 9 |
| :---: | :---: | :---: | :---: |
| 1 | 1 | 3 | 9 |
| 3 | 3 | 9 | 27 |
| 9 | 9 | 27 | 81 |

3. Possible responses: All the products are even or multiples of 4 . The products on the upper right-to-lower left diagonal are the same.
4. Possible responses: All the products are odd. The products on the upper right-to-lower left diagonal are the same.
5. 

| $\times$ | $\mathbf{1 0}$ | $\mathbf{5}$ | $\mathbf{0}$ |
| :---: | :---: | :---: | :---: |
| $\mathbf{1 0}$ | 100 | 50 | 0 |
| $\mathbf{5}$ | 50 | 25 | 0 |
| $\mathbf{0}$ | 0 | 0 | 0 |

6. 

| $\times$ | $\mathbf{6}$ | $\mathbf{5}$ | $\mathbf{7}$ |
| :---: | :---: | :---: | :---: |
| $\mathbf{6}$ | 36 | 30 | 42 |
| $\mathbf{5}$ | 30 | 25 | 35 |
| $\mathbf{7}$ | 42 | 35 | 49 |

7. A. Possible response: All the numbers are 0 .
B. Any number times 0 is 0 .
8. The square numbers are on the upper left-tolower right diagonal.
9. 

| $\times$ | $\mathbf{8}$ | $\mathbf{6}$ | 4 |
| :---: | :---: | :---: | :---: |
| $\mathbf{8}$ | 64 | 48 | 32 |
| 6 | 48 | 36 | 24 |
| 4 | 32 | 24 | 16 |

10. 


II.

| $\mathbf{x}$ | $\mathbf{2 0}$ | $\mathbf{5 0}$ | $\mathbf{8 0}$ |
| :---: | :---: | :---: | :---: |
| $\mathbf{9}$ | 180 | 450 | 720 |
| 4 | 80 | 200 | 320 |
| 7 | 140 | 350 | 560 |

12. 

| $\times$ | 7 | 6 | 4 |
| :---: | :---: | :---: | :---: |
| 30 | 210 | 180 | 120 |
| 90 | 630 | 540 | 360 |
| 100 | 700 | 600 | 400 |

13. 


14.

| $\div$ | $\mathbf{4 0}$ | $\mathbf{6 0}$ | $\mathbf{8 0}$ |
| :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | 40 | 60 | 80 |
| $\mathbf{5}$ | 8 | 12 | 16 |
| $\mathbf{1 0}$ | 4 | 6 | 8 |

15. Strategies will vary. Students may have used $80 \div 10=8$ to help them solve $80 \div 5=16$

## Name Date

$\qquad$

3. What patterns do you see in the table in Question 1?
4. What patterns do you see in the table in Question 2?

7. A. What patterns do you see in the last row and column in Question 5? B. What happens when you multiply a number times 0 ?
8. Where are the square numbers in the table in Question 6?

Student Activity Book - Page 187


Fill in these division tables. Divide the dividend across the top by
ill in $13 . \quad 1$

15. For the division table in Question 14, what strategy did you use to find the quotients?

88 SAB • Grade 4 • Unit 6 Lesson 1


Student Activity Book - Page 188

