Name .....

MY Homework

Operations and Algebraic Thinking

3.OA.1, 3.OA.3, 3.OA.4, 3.OA.5, 3.OA.7, 3.OA.9

Lesson 5

Multiply by 9

Homework Helper

eHelp

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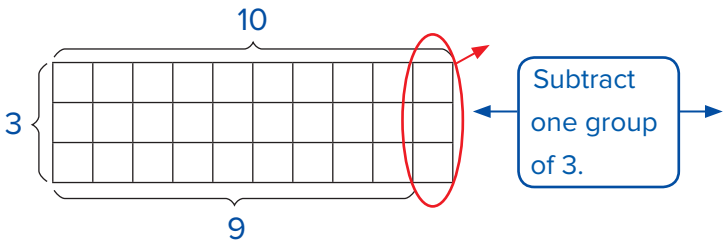
Delia counted 9 petals on each flower she picked. If she picked 3 flowers, how many petals are there in all?

Find 3×9.

One Way **Subtract from a known 10s fact.**



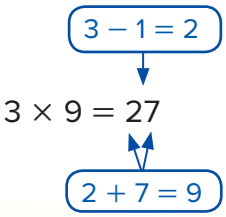
$3 \times 10 = 30$

$30 - 3$

27

Another Way **Use patterns.**

Starting with the product 18, the multiples of 9 follow a pattern. The tens digit in each product is 1 less than the factor that is not 9. The sum of the digits in the product is 9.



So, there are 27 petals in all.

Practice

Use the Commutative Property to find each product or missing factor.

1. 9×7

$\square \times 9 = 63$

2. $2 \times \square = 18$

9×2

3. 9×5

$\square \times 9 = 45$

Draw an array for a known 10s fact. Then subtract 1 from each row to find the product.

4. $6 \times 9 =$ ____

Known fact: ____ × ____ = ____

60 − ____ = ____

5. $4 \times 9 =$ ____

Known fact: ____ × ____ = ____

____ − ____ = ____

Algebra **Use the Commutative Property to find each unknown.**

6. $9 \times \square = 36$

$\square \times 9 = 36$

The unknown is ____.

7. $\square \times 9 = 72$

$9 \times \square = 72$

The unknown is ____.

Brain Builders

Mathematical PRACTICE 3

8. **Justify Conclusions** Ty works 4 hours on Saturday and 5 hours on Sunday and earns $6 an hour. Cal works 3 hours each on Saturday and Sunday and earns $9 an hour. If they both work 5 weeks on this schedule, who earns more money? Who works longer? Explain.

9. **Test Practice** Anna lives 9 blocks from school. How many blocks does she walk to and from school on Monday, Wednesday, and Thursday?

Ⓐ 6 blocks

Ⓑ 9 blocks

Ⓒ 27 blocks

Ⓓ 54 blocks