Name _____

MY Homework

Lesson 6

Use Multiplication to Find Combinations

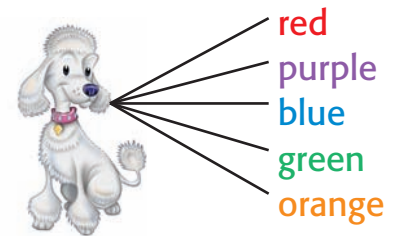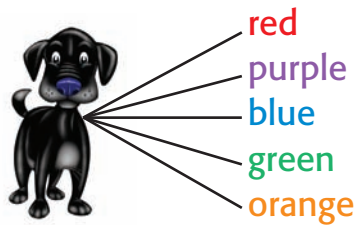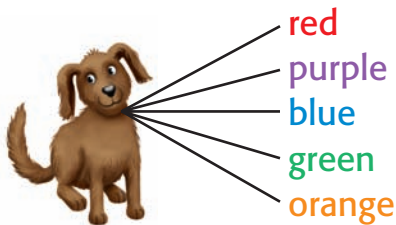## Homework Helper eHelp

Need help? connectED.mcgraw-hill.com

Lucia's three dogs have red, purple, blue, green, and orange collars that they take turns wearing. Find the number of possible dog and collar combinations.
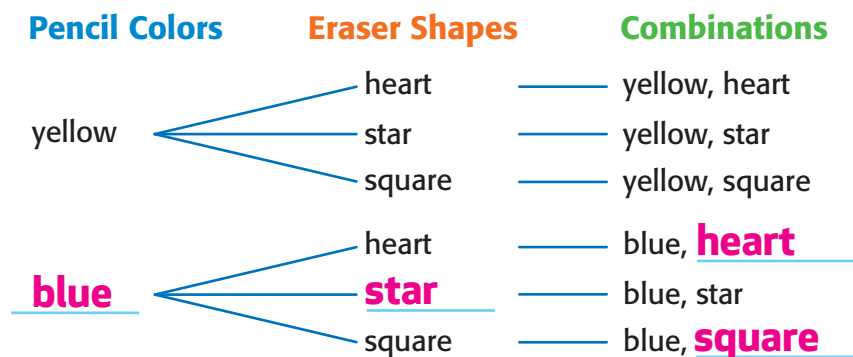
Show all of the possible combinations.

red
purple
blue
green
orange

red
purple
blue
green
orange

red
purple
blue
green
orange

There are 3 dogs and 5 collar colors.
$3 \times 5 = 15$ possible combinations

Practice

1. Diana can take 1 pencil and 1 eraser to school. Her choices are shown. How many different pencil and eraser combinations are there? Complete the tree diagram. Write a multiplication sentence.

Pencil Colors   **Eraser Shapes**   **Combinations**

yellow
heart — yellow, heart
star — yellow, star
square — yellow, square

blue
heart — blue, **heart**
star — blue, star
square — blue, **square**

___**2**___ × ___**3**___ = ___**6**___ combinations

2. **Mathematical PRACTICE 7** **Identify Structure** For a snack, Randy can choose from peanuts, carrots, or popcorn. He can have water or juice to drink. How many snack and drink combinations are there? Complete the tree diagram. Write a multiplication sentence.

Snack	Drink	Combinations
carrots	**water**	**carrots, water**
	juice	**carrots, juice**
peanuts	**water**	**peanuts, water**
	juice	**peanuts, juice**
popcorn	**water**	**popcorn, water**
	juice	**popcorn, juice**
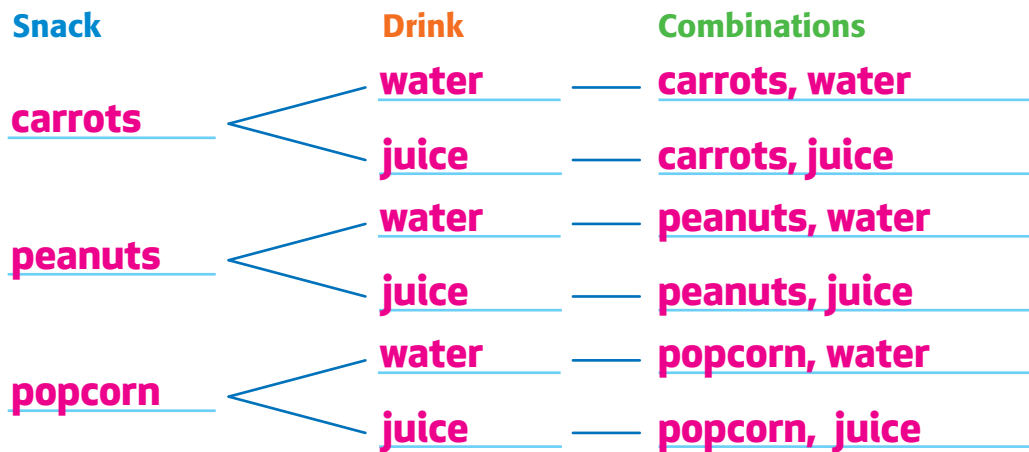
___**3**___ × ___**2**___ = ___**6**___ combinations

Vocabulary Check

3. Write the correct vocabulary word(s) in each space to complete the sentence.

combination   tree diagram

Each branch of a ___**tree diagram**___ shows a possible ___**combination**___ of items.

Test Practice

4. Amanda bought 4 pairs of shoes and 5 purses. Which number sentence shows the number of different shoes and purse combinations that Amanda can make?

Ⓐ $4 + 5 = 9$ Ⓒ $4 + 4 + 4 + 4 = 16$

Ⓑ $5 × 8 = 40$ **Ⓓ** $4 × 5 = 20$