REVIEW: Counting Principle

Key Concept and Vocabulary

Event 1 can occur in m ways. Event 2 can occur in n ways.

Event 1 followed by Event 2 can occur in $m \times n$ ways.



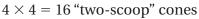


Name _____

Visual Model

4 flavor choices for 1st scoop

4 flavor choices for 2nd scoop





Skill Example

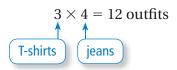
1. Event 1 can occur in 6 ways. Event 2 can occur in 3 ways.

Event 1 followed by Event 2 can occur in

 $6 \times 3 = 18$ ways.

Application Example

2. How many outfits can you make using 3 T-shirts and 4 pairs of jeans?



You can make 12 different outfits.

PRACTICE MAKES PURR-FECT

Check your answers at BigIdeasMath.com. —

Find the number of ways that Event 1 can occur followed by Event 2.

3. Event 1 can occur in 5 ways. Event 2 can occur in 6 ways.

30 ways

5. Event 1 can occur in 11 ways. Event 2 can occur in 11 ways.

121 ways

- **4.** Event 1 can occur in 10 ways. Event 2 can occur in 3 ways. 30 ways
- **6.** Event 1 can occur in 14 ways. Event 2 can occur in 4 ways. 56 ways

Find the number of ways that Event 1 can occur followed by Event 2, followed by Event 3.

7. Event 1 can occur in 2 ways. Event 2 can occur in 4 ways. Event 3 can occur in 5 ways.

40 ways

8. Event 1 can occur in 8 ways. Event 2 can occur in 7 ways. Event 3 can occur in 6 ways. 336 ways

- **10. OUTFITS** How many of the outfits have the gray jeans? <u>4 outfits</u>

