

Breaking Products into Factors

NCTM Standards 1, 2, 6, 7, 9, 10

A map has 14 intersections and 2 vertical streets.

1 Draw the map.

2 How many horizontal streets are there?

horizontal streets

3 Solve.

$$2 \times \square = 14$$

$$14 \div 2 = \square$$

**16 dots are arranged in a rectangular array.
The array has 4 rows.**

4 Draw the array.

5 How many columns are there?

columns

6 Solve.

$$4 \times \square = 16$$

$$16 \div 4 = \square$$

6 boys are sharing 18 pretzels.

7 Draw a picture to show how many pretzels each boy would get.

Each boy gets pretzels.

8 Solve.

$$6 \times \square = 18$$

$$18 \div 6 = \square$$

For each number of intersections, draw a map and complete the multiplication sentence.

9

15 intersections

$$\square \times \square = 15$$

10

9 intersections

$$\square \times \square = 9$$

11

10 intersections

$$\square \times \square = 10$$

12

21 intersections

$$\square \times \square = 21$$

13 Challenge Draw all the maps with 12 intersections.

List all the factors of 12: _____