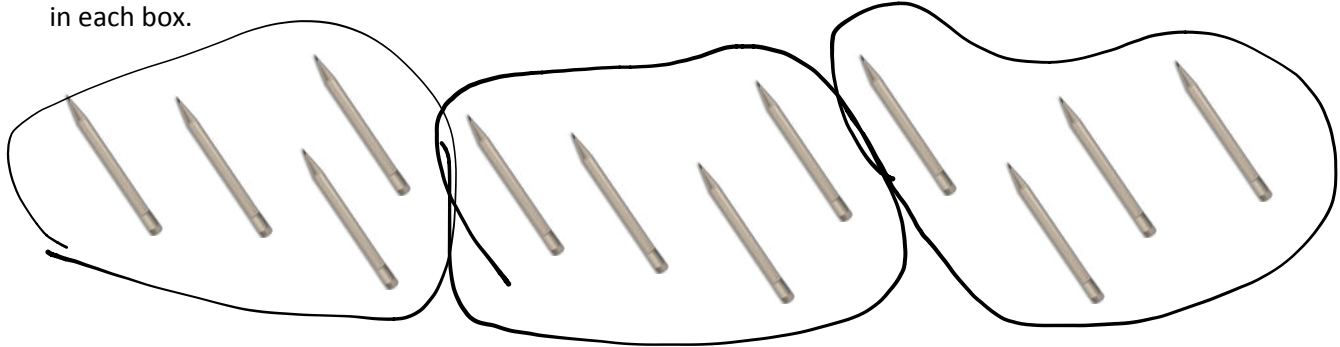


Name \_\_\_\_\_

Date \_\_\_\_\_

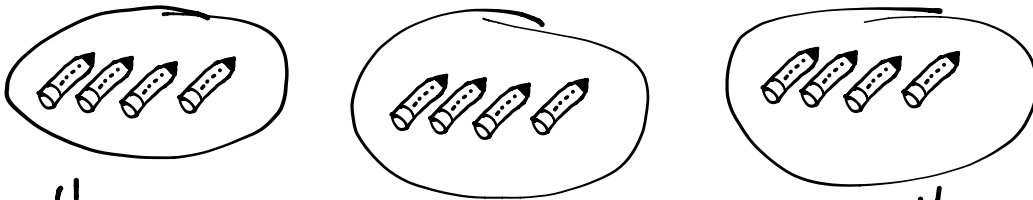
1. Mr. Hannigan puts 12 pencils into boxes. Each box holds 4 pencils. Circle groups of 4 to show the pencils in each box.



Mr. Hannigan needs 3 boxes.

$$\begin{array}{r} 3 \times 4 = 12 \\ 12 \div 4 = 3 \end{array}$$

2. Mr. Hannigan places 12 pencils into 3 equal groups. Draw to show how many pencils are in each group.

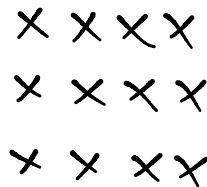


There are 4 pencils in each group.

$$\begin{array}{r} 3 \times 4 = 12 \\ 12 \div 3 = 4 \end{array}$$

3. Use an array to model Problem 1.

a)  $\underline{3} \times 4 = 12$   
 $12 \div 4 = \underline{3}$



b)  $3 \times \underline{4} = 12$   
 $12 \div 3 = \underline{4}$

The number in the blanks represents:  
Number of rows

The number in the blanks represents:  
Size of each row

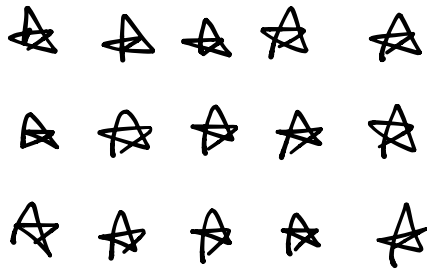
4. Judy washes 24 dishes. She then dries and stacks the dishes equally into 4 piles. How many dishes are in each pile?

$$24 \div 4 = \underline{6}$$

$$4 \times \underline{6} = 24$$

What is the meaning of the unknown factor and quotient? The number of plates in each pile.

5. Nate solves the problem  $\underline{3} \times 5 = 15$  by writing and solving  $15 \div 5 = \underline{3}$ . Explain why Nate's method works.



Both problems describe an array with 15 stars. Each row has 5 stars.

6. The blanks in Problem 5 represent the number of groups. Draw an array to represent the number sentences.

