FACT STRATEGIES

Division

Based on the work of math interventionists Laurie Kilts and Kim Hornbeck, this set of posters uses words, numbers, and pictures to illustrate six different methods for solving a division combination without a remainder. While the examples involve two-digit dividends less than 40, some of the strategies can be applied to solving larger combinations. All of the strategies are introduced and reviewed in Bridges in Mathematics and Number Corner Grades 3 and 4.

Grade Level Suggestions	
Grades 3 & 4 Display each poster after you have introduced or reviewed the strategy, and leave it up for students' reference through the year.	**Grade 5** Display and review the entire collection early in the school year, and leave it up through the year for students' reference.

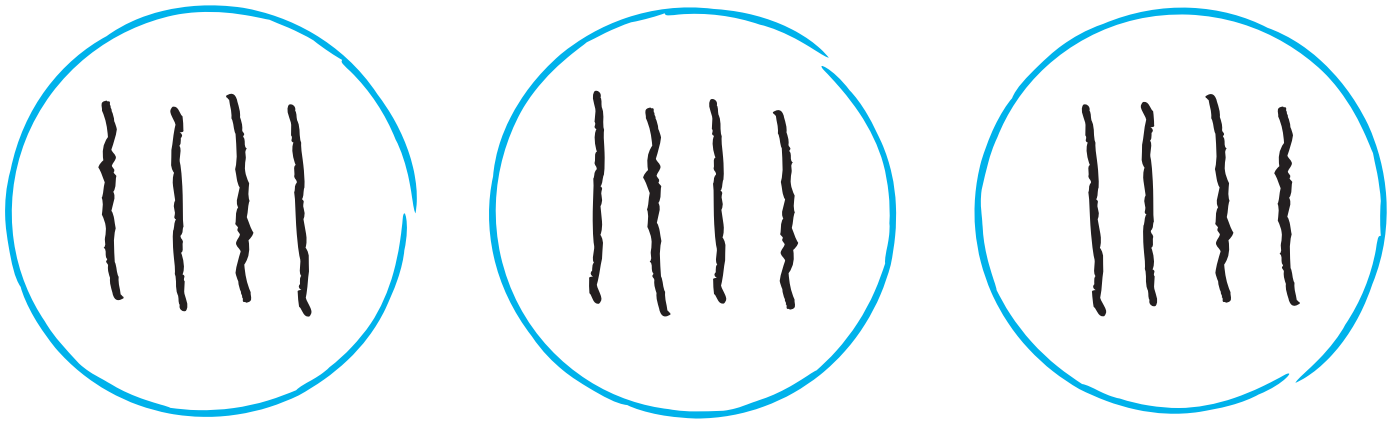
These posters are set up for printing on letter size paper. You can enlarge them onto larger paper, such as 11 × 17, if you wish. Post them in your classroom for student reference and discussion.

The MATH LEARNING CENTER

How many in each group?

$$12 \div 3 = ?$$

If we divide 12 tally marks into 3 equal groups, how many will there be in each group?

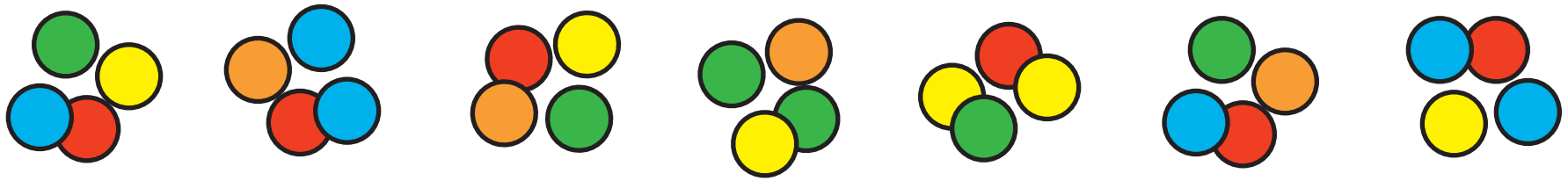


Each group got 4 tally marks, so 12 ÷ 3 = 4.

How many equal groups?

$$28 \div 4 = ?$$

If we divide 28 counters into equal groups of 4, how many groups will we make?



We can make 7 groups of 4, so 28 ÷ 4 = 7.

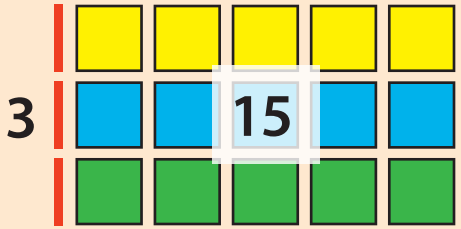
Build a tile array

15 ÷ 3 = ?

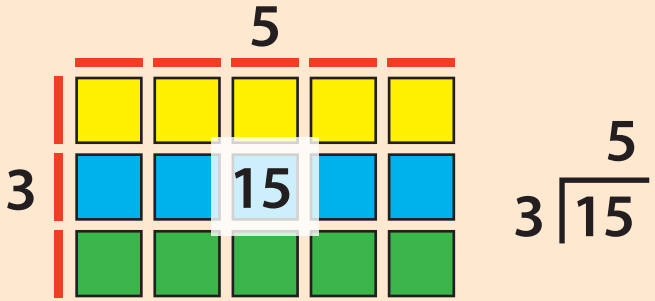
If we arrange 15 tiles to form an array with a dimension of 3, what is the other dimension?

Use red linear pieces to show the divisor.

Divide the dividend equally.



Use red linear pieces to show the quotient.

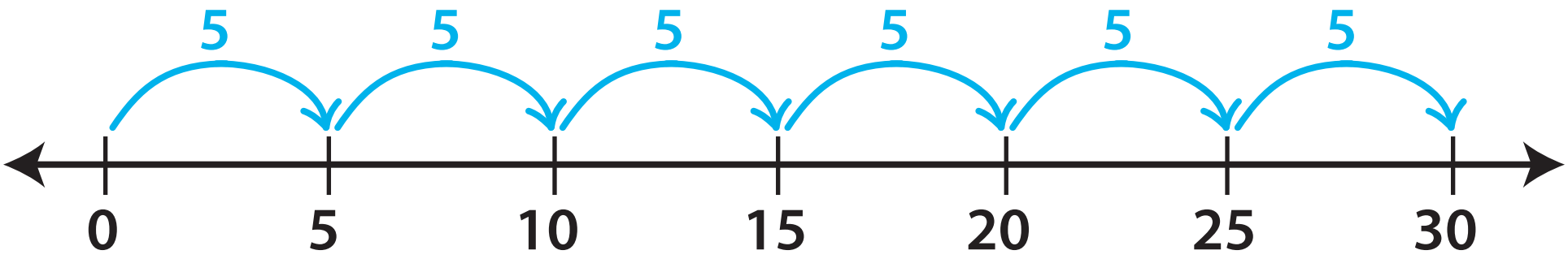


There are 5 in each row, so 15 ÷ 3 = 5.

Use skip-counting

30 ÷ 5 = ?

How many times do we have to count by 5 to reach 30?



If you skip-count by 5 six times, you get to 30, so 30 ÷ 5 = 6.

Think multiplication

$$32 \div 8 = ?$$

$$8 \times \square = 32$$

I know that 8×4 is 32, so $32 \div 8 = 4$.

Break apart

$$36 \div 3 = ?$$

Break the dividend apart.
Divide each part and add the quotients.

$$36 = 30 + 6$$

$$30 \div 3 = 10 \text{ and } 6 \div 3 = 2$$

$$10 + 2 = 12 \text{ so } 36 \div 3 = 12$$

When we solve division problems this way,
we're using the *distributive property.*