

**Learning Multiplication Combinations** (page 1 of 2)

Dear Family,

To develop good computation strategies, students need to become fluent with the multiplication combinations from  $1 \times 1$  to  $12 \times 12$ , often known as “multiplication facts” or “multiplication tables.” In third grade students begin this work by learning the multiplication combinations with products up to 50. Students are expected to know all the combinations up to  $12 \times 12$  by the end of fourth grade.

It is important for students to recognize that problems such as  $8 \times 3$  and  $3 \times 8$  have the same product. Encourage students to “turn around” a multiplication combination if that makes the problem easier to solve. For example, your child may find it easier to remember the product of  $3 \times 8$  than that of  $8 \times 3$ .

In school, students are sorting a set of Multiplication Cards into “Combinations I Know” and “Combinations I’m Working On.” They write clues on their Multiplication Cards to help them learn the combinations that are difficult for them. Students use a combination that they know that is close to the combination they are solving and then adjust to find the product. Here are some examples.

$$4 \times 8$$

$$8 \times 4$$

Start with  $2 \times 8$

$$4 \times 8 = (2 \times 8) + (2 \times 8)$$

(continued)

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$$6 \times 7$$

$$7 \times 6$$

Start with  $5 \times 5$ 

$$6 \times 7 = (6 \times 5) + (6 \times 2)$$

$$4 \times 9$$

$$9 \times 4$$

Start with  $10 \times 4$ 

$$9 \times 4 = (10 \times 4) - 4$$

As they use the clues to practice, students gradually come to know the combinations that are difficult for them. To help your child learn the multiplication combinations ("facts"), ask your child questions such as the following:

- Which multiplication combinations are you learning?
- Is there a related combination that you already know?  
Could that be a useful clue?
- Which two or three of the combinations should we focus on this week?