

# Number Sense: Multiplying by 1-Digit Numbers

Dear Family,

Your child is learning methods to multiply two- and three-digit numbers by one-digit numbers. By looking for patterns in multiplication facts, he or she can also multiply multiples of 10 by one-digit numbers using mental math. Here are some sample patterns that your child is learning:

$$4 \times 5 = 20$$

$$6 \times 8 = 48$$

$$4 \times 50 = 200$$

$$60 \times 8 = 480$$

$$4 \times 500 = 2,000$$

$$600 \times 8 = 4,800$$

These patterns also help your child estimate products. For example, to estimate  $4 \times 32$ , round 32 to the nearest ten (30) and then multiply using mental math ( $4 \times 30 = 120$ ). To find the product of  $4 \times 32$ , make an array.



Break apart 32 into 30 and 2. Think of  $4 \times 32$  as  $(4 \times 30) + (4 \times 2)$ . So,  $120 + 8 = 128$ .

Your child can compare the product to the estimate to see if an answer is reasonable. You can help your child learn these skills by doing the following activity together.

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## Multiplying Greater Numbers

**Step 1** Give your child a two-digit by one-digit multiplication problem, such as  $5 \times 49$ .

**Step 2** Ask your child to estimate the product and then solve. He or she can draw an array to find the product.

**Step 3** Ask if the answer is reasonable, and have your child explain his or her reasoning.