

# Bright Horizons Academy

Grade 5: Mathematics

## Multiplying Decimals (Step-by-Step Guide)

### Objective:

Students will learn how to *multiply* decimals step by step and *correctly* place the decimal point in the final product.

### Core Content:

When multiplying decimals -

- **Ignore the decimals:** Treat the numbers as whole numbers and multiply them.
- **Count the decimal places:** Add the number of decimal places in both factors.
- **Place the decimal point:** In the product, move the decimal point from the right by the total number of decimal places.
- **Simplify if needed:** If the product ends with zeros after the decimal point, simplify the answer by removing unnecessary zeros.

### Examples:

1.  $0.3 \times 0.4$ 
  - a. Multiply as whole numbers:  $3 \times 4 = 12$

- b. Count the decimal places: Two decimal places total (one in each factor)
  - c. Move the decimal two places from the right: 0.12
- 2.  $1.2 \times 0.5$ 
  - a. Multiply as whole numbers:  $12 \times 5 = 60$
  - b. Count the decimal places: Two decimal places total
  - c. Move the decimal two places from the right: 0.60 (or 0.6)
- 3.  $2.5 \times 0.2$ 
  - a. Multiply as whole numbers:  $25 \times 2 = 50$
  - b. Count the decimal places: Two decimal places total
  - c. Move the decimal point: 0.50 (or 0.5)

## Practice Questions:

Try these problems to practice multiplying decimals.

- 1.  $0.2 \times 0.2 = ?$
- 2.  $1.5 \times 0.3 = ?$
- 3.  $2.4 \times 0.5 = ?$
- 4.  $0.06 \times 0.3 = ?$
- 5.  $3.2 \times 0.4 = ?$

## Answers to Practice Questions:

- 1.  $0.2 \times 0.2$ 
  - Step 1: Multiply as whole numbers:  $2 \times 2 = 4$ .
  - Step 2: Count decimal places: Two total.
  - Step 3: Move the decimal point: 0.04.

2.  $1.5 \times 0.3$

- Step 1: Multiply as whole numbers:  $15 \times 3 = 45$ .
- Step 2: Count decimal places: Two total.
- Step 3: Move the decimal point: 0.45.

3.  $2.4 \times 0.5$

- Step 1: Multiply as whole numbers:  $24 \times 5 = 120$ .
- Step 2: Count decimal places: Two total.
- Step 3: Move the decimal point: 1.20 or 1.2.

4.  $0.06 \times 0.3$

- Step 1: Multiply as whole numbers:  $6 \times 3 = 18$ .
- Step 2: Count decimal places: Three total.
- Step 3: Move the decimal point: 0.018.

5.  $3.2 \times 0.4$

- Step 1: Multiply as whole numbers:  $32 \times 4 = 128$ .
- Step 2: Count decimal places: Two total.
- Step 3: Move the decimal point: 1.28.