To Find the Product of a Decimal by a Decimal

Understanding the Topic

- To find the product of a decimal by a decimal, we multiply the numbers like whole numbers.
- We ignore the decimal points at first.
- After multiplying, we count the total number of digits after the decimal in both numbers.
- Then we place the decimal point in the final product from the right.

Steps to Find the Product

- **Step 1:** Ignore the decimal points in both numbers and multiply like whole numbers.
- **Step 2:** Count the digits after the decimal point in both numbers.
- **Step 3:** Add the number of decimal places.
- **Step 4:** Place the decimal in the product from right to left based on total decimal places.

Examples with Solutions

1. Multiply 0.3 × 0.2

 $3 \times 2 = 6$

Decimal places: 1 in each number \rightarrow total 2

Place decimal: 0.06

Answer: 0.06

2. Multiply 1.6 × 0.5

 $16 \times 5 = 80$

Decimal places: 1 + 1 = 2

Place decimal: 0.80

Answer: 0.8

3. Multiply 2.5 × 1.2

25 × 12 = 300

Decimal places: 1 + 1 = 2

Place decimal: 3.00

Answer: 3.0

4. Multiply 0.75 × 0.4

75 × 4 = 300

Decimal places: 2 + 1 = 3

Place decimal: 0.300

Answer: 0.3

5. Multiply 3.25 × 2.1

325 × 21 = 6825

Decimal places: 2 + 1 = 3

Place decimal: 6.825

Answer: 6.825

Summary Points

- Multiply decimals by ignoring decimal points first.
- Count total decimal places in both numbers.
- Place the decimal point in the product accordingly.
- Always double-check the number of digits after the decimal.
- **Example:** 0.4 × 0.6 = 0.24.