Division of Decimals

Understanding the Topic

- Division of decimals means splitting a decimal number into equal parts.
- You can divide a decimal by a whole number or by another decimal.
- When dividing, we must carefully place the decimal point in the answer.
- If the divisor is a decimal, we first convert it into a whole number by shifting the decimal point.

Steps to Divide Decimals

- **Step 1:** If dividing by a whole number, divide as usual and place the decimal in the answer directly above its place in the dividend.
- **Step 2:** If dividing by a decimal, multiply both the dividend and divisor by 10 or 100 to make the divisor a whole number.
- **Step 3:** Then divide as usual.
- **Step 4:** Add zeros if needed to complete the division.

Examples with Solutions

1. Divide 4.8 ÷ 2

Divide as usual: 48 ÷ 2 = 24

One decimal place in 4.8 → Answer = 2.4

Answer: 2.4

2. Divide 6.3 ÷ 3

63 ÷ 3 = 21

One decimal place in 6.3 → Answer = 2.1

Answer: 2.1

3. Divide 7.2 ÷ 0.6

Multiply both numbers by 10 → 72 ÷ 6 = 12

Answer: 12

4. Divide 0.84 ÷ 0.2

Multiply both by 10 → 8.4 ÷ 2 = 4.2

Answer: 4.2

5. Divide 1.25 ÷ 0.5

Multiply both by 10 → 12.5 ÷ 5 = 2.5

Answer: 2.5

Summary Points

- To divide a decimal by a whole number, divide normally and place the decimal in the correct position.
- To divide by a decimal, convert the divisor to a whole number by multiplying both numbers by 10 or 100.
- Always keep track of decimal places while dividing.
- Add zeros if needed to continue the division.
- Example: 0.6 ÷ 0.3 = 2.