Year 5

Multiplying & Dividing Decimals by 10, 100, 1000

Quick Revision Reminder

- **When multiplying (×),** digits move to the **left** on a place value grid (the number gets bigger).
- **When dividing (÷),** digits move to the **right** on a place value grid (the number gets smaller).
- **10** = move **1** place | **100** = move **2** places | **1000** = move **3** places.

Part 1: Arithmetic Warm-up

Complete the calculations below.

1. $4.26 \times 10 = \_\_$
2. $15.8 \div 100 = \_\_$
3. $0.073 \times 1000 = \_\_$
4. $612.4 \div 1000 = \_\_$
5. $0.93 \times 100 = \_\_$

Part 2: SATs-Style Missing Number Questions

Fill in the missing numbers or symbols to make the math balance correctly.

6. Write the missing number.

$$6.108 \times \_\_\_\_\_ = 610.8$$

7. Write the missing symbol (× or ÷) in the box.

$$43.9 \quad \square \quad 100 = 0.439$$

8. Write the missing number.

$$\_\_\_\_\_ \div 1000 = 0.025$$

9. Write the missing number.

$$0.74 \times 10 = 740 \div \_\_\_\_\_$$

Continued ...

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Part 3: Balance and Comparison (SATs-Style)

10. Write true or false for each of the following:

$3.4 \times 100 = 3400 \div 10$ true/false

$0.091 \times 1000 = 9.1 \times 10$ true/false

$82.3 \div 10 = 8230 \div 1000$ true/false

Part 4: Word Problems and Reasoning

Show your working out for these multi-step or context problems.

11. A stack of 100 identical textbooks has a total mass of 14.5 kg. What is the mass of one textbook? Give your answer in kilograms.

Working out space: _____

Answer: __ kg

12. An individual paperclip weighs 0.012 grams. A factory packs paperclips into boxes of 1,000. What is the total mass of a full box of paperclips?

Working out space:

Answer: __ grams

13. Circle the mistake. Olivia is completing her homework. She writes:

$$0.54 \div 10 = 0.054$$

$$5.4 \times 100 = 540$$

$$0.054 \times 1000 = 5.4$$

Explain why Olivia's final calculation is incorrect. What should the correct answer be?

Explanation: