Year 4
Answers
Multiplying and Dividing Decimals by 10 and 100

Time to check your progress and see how well you did.

Part 1: Arithmetic Warm-up

1. 35
   Why? Multiplying by 10 shifts the digits **one** place to the left. 3.5 becomes 35.

2. 620
   Why? Multiplying by 100 shifts the digits **two** places to the left. Don't forget to use 0 as a place holder in the ones column!

3. 4.1 (or 4.10)
   Why? Dividing by 10 shifts the digits **one** place to the right.

4. 0.58
   Why? Dividing by 100 shifts the digits **two** places to the right. The 5 hops out of the tens column into the tenths column.

5. 74
   Why? Multiplying by 100 shifts the digits **two** places to the left, lifting 0.74 up into a whole number.

Part 2: SATs-Style Missing Number Questions

6. 100
   Check: To turn 0.9 into 90, the digits have to jump **two** places to the left. That means multiplying by 100.

7. $\div$
   Check: 7.3 became 0.73. The number shrunk, so it has to be a **division (÷)** sign.

8. 14
   Check: Think in reverse! Flip it to multiplication: $0.14 \times 100 = 14$.

9. 100
   Check: Split the puzzle. The left side is $4.2 \times 10 = 42$. To make the right side match and also equal 42, you have to do $420 \div 100$.

Continued...

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Part 3: Balance and Comparison

10. $8.5 \times 10 = 850 \div 10$ true
    Both sides equal 85.

    $0.23 \times 100 = 2.3 \times 10$ true
    Both sides equal 23.

    $6.0 \div 10 = 60 \div 100$ true
    Both sides equal 0.6.

Part 4: Word Problems & Reasoning

11. £0.45 (or 45p)
    How to solve: Share the total price (£4.50) among the 10 pencils. Divide by 10:
    $4.50 \div 10 = £0.45$

12. 85 cm
    Type equation here.*How to solve:* Find the combined height of 100 bricks. Multiply by 100: $0.85 \times 100 = 85$ cm

13. Your explanation should say something like:

    "Ben's final calculation is wrong because dividing by 10 should make a number smaller, but his answer stayed the same size. $3.3 \div 10$ equals 0.33, because the digits must move one place to the right."