Decimals

KS3 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Work out 3.6 × 0.04

Step 1 · Ignore decimal points: multiply numbers

36 × 4 = 144

Step 2 · Count total decimal places in the question: 1 + 2 = 3

Answer needs 3 decimal places

Step 3 · Write 144 with 3 decimal places

0.144

Answer: 0.144

Check: 3.6 × 0.04 = 0.144 ✓ (≈ 4 × 0.04 = 0.16, close enough)

2. Now try one with the steps

Calculate 4.2 ÷ 0.6

Step 1 · Multiply both numbers by 10 to remove the decimal from the divisor

Step 2 · Now divide numbers

Step 3 · Check: multiplying both by 10 doesn't change the ratio

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. What digit is in the hundredths place in 7.439? [1]

2. Order from smallest to largest: 0.7 0.07 0.77 0.707 [1]

3. Calculate 2.34 × 100 [1]

4. Work out 0.8 × 0.5 [2]

5. Calculate 7.2 ÷ 0.09 [2]

6. Convert 7/20 to a decimal. [2]

7. Calculate 5.7 + 12.48 [1]

8. Calculate 9 – 3.65 [1]

9. Calculate 0.46 ÷ 10 [1]

10. Work out 3.2 × 0.3 [1]

11. Write 0.45 fraction in its simplest form. [2]

12. Work out 1.24 × 2.5 [2]

13. Calculate 6.3 ÷ 0.7 [1]

14. Convert 3/8 to a decimal. [2]

15. Pencils cost £0.35 each. What is the greatest number Tomás can buy with £5? [2]

16. Calculate 0.04 × 0.003 [2]

17. Write 2/3 decimal. What is special about it? [2]

4. Before you hand it in

0.7 > 0.62 because 7 > 62
Always line up the decimal points first. 0.70 vs 0.62 — compare column by column: both have 0 units, but tenths 7 > 6, so 0.7 > 0.62.

3.6 × 10 = 3.60 (writing a zero at the end)
Each ×10 shifts every digit ONE place to the left: 3.6 → 36. The decimal point stays in the same position between units and tenths; the digits move. Use the interactive to see this.

0.3 × 0.4 = 1.2 (forgetting decimal places in the answer)
Count total decimal places in the question: 0.3 has 1, 0.4 has 1, total = 2. So 3 × 4 = 12 → 0.12.

4.8 ÷ 0.6 = 0.8 (dividing instead of multiplying both by 10)
4.8 ÷ 0.6 = 48 ÷ 6 = 8. Multiply both top and bottom by 10 first. Dividing by a decimal less than 1 gives a larger answer, so 0.8 is clearly wrong.