Guide to: Place Value

maths Links

Explanation:

The position of a digit in a number determines its **place value**: Thousands (1000), Hundreds (100), Tens (10), Units (1), Tenths (0.1 or $\frac{1}{10}$), Hundredths (0.01 or $\frac{1}{100}$), and Thousandths (0.001).

When multiplying by 10, 100, or 1000, the digits move 1, 2, or 3 places to the **left** (making the number bigger). When dividing by 10, 100, or 1000, the digits move 1, 2, or 3 places to the **right**. Use this to adapt a given calculation.

Example 1: For the number **47 308.29**, write down the value of: (a) the digit **7** (b) the digit **9**

Solution:

(a) The digit 7 is in the **thousands** column:
• Value = **7000** (or seven thousand)
(b) The digit 9 is in the **hundredths** column:
• Value = **0.09** (or $\frac{9}{100}$, nine hundredths)

Answers: (a) 7000 (b) 0.09

Example 2: Given that **46 × 38 = 1748**, write down the value of: (a) **4.6 × 3.8** (b) **174.8 ÷ 38**

Solution:

(a) 46 is divided by 10 and 38 is divided by 10:
• Divide 1748 by 100 (10 × 10) → **17.48**
(b) Since 1748 ÷ 38 = 46, and 174.8 is 10 times smaller:
• Divide 46 by 10 → **4.6**

Answers: (a) 17.48 (b) 4.6

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ken@mathslinks.co.uk