Exercise 1

Paper 1 style · No calculator

1 5 marks SL 1.1 ●○○ Routine

Let $A = 2.5 \times 10^6$ and $B = 4 \times 10^{-3}$.

(a) Write $0.000\,83$ in standard form. **[1]**

(b) Find AB, giving your answer in the form $a \times 10^k$, where $1 \leq a < 10$ and $k \in \mathbb{Z}$. **[2]**

(c) Find $\frac{A}{B}$, giving your answer in the form $a \times 10^k$, where $1 \leq a < 10$ and $k \in \mathbb{Z}$. **[2]**

The markscheme is on the next page: try the question first. Written and verified by a practising IB mathematics teacher, produced with AI assistance; solved twice and recomputed by software. Not affiliated with or endorsed by the International Baccalaureate Organization.
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MARKSCHEME (a)

8.3×10^{-4} **A1**

Total 1 mark

MARKSCHEME (b)

$2.5 \times 4 \times 10^{6-3} = 10 \times 10^3$ **(M1)**

1×10^4 **A1**

Total 2 marks

Note 10×10^3 is not in standard form.

MARKSCHEME (c)

$\frac{2.5}{4} \times 10^{6+3} = 0.625 \times 10^9$ **(M1)**

6.25×10^8 **A1**

Total 2 marks