

1.16 (a) $\sqrt[3]{\frac{2.78 \times 10^{11}}{3.12 \times 10^{-3}}}$ OR $\sqrt[3]{8.91025... \times 10^{13}}$ (M1)

Note: Award (M1) for correct substitution into given expression.

44664.59503 (A1) (C2)

Note: Award (A1) for a correct answer with at least 8 digits.
Accept 44664.5950301.

[2 marks]

(b) (i) 44664.60 (A1)(ft) (C1)

Note: For a follow through mark, the answer to part (a) must be to at least 3 decimal places.

(ii) 44700 (A1)(ft) (C1)

Notes: Answer to part (a) must be to at least 4 significant figures.
Accept any equivalent notation which is correct to 3 significant figures.
For example 447×10^2 or 44.7×10^3 .
Follow through from part (a).

[2 marks]

(c) 4.47×10^4 (A1)(ft)(A1)(ft) (C2)

Notes: Award (A1)(ft) for 4.47 and (A1)(ft) for 10^4 .
Award (A0)(A0) for answers such as 44.7×10^3 .
Follow through from part (b)(ii) **only**.

[2 marks]

Total [6 marks]