

QUESTION 1.3 *Unit penalty (UP) applies in part (a).*

(a) $\frac{2 \times \pi \times 150\,000\,000}{365}$ **(M1)(A1)(M1)**

Notes: Award **(M1)** for substitution in correct formula for circumference of circle.
Award **(A1)** for correct substitution.
Award **(M1)** for dividing their perimeter by 365.
Award **(M0)(A0)(M1)** for $\frac{150\,000\,000}{365}$.

(UP) 2580000 km **(A1)** **(C4)**

(b) 2.58×10^6 **(A1)(ft)(A1)(ft)** **(C2)**

Notes: Award **(A1)(ft)** for 2.58, **(A1)(ft)** for 10^6 .
Follow through from their answer to part (a).
The follow through for the index should be dependent not only on the answer to part (a), but also on the value of their mantissa.
No **(AP)** penalty for first **(A1)** provided their value is to 3 sf or is all their digits from part (a).

[6 marks]