IGCSE – Sine/Cosine Rule/Bearings – 2

May 06 Paper 4

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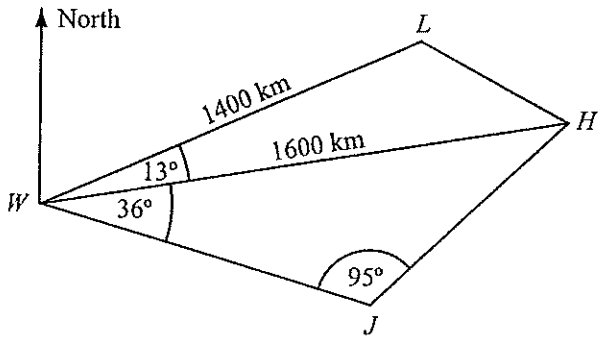

NOT TO SCALE

The diagram shows the positions of four cities in Africa, Windhoek (W), Johannesburg (J), Harari (H) and Lusaka (L).
$WL = 1400$ km and $WH = 1600$ km.
Angle $LWH = 13°$, angle $HWJ = 36°$ and angle $WJH = 95°$.

(a) Calculate the distance LH. [4]

(b) Calculate the distance WJ. [4]

(c) Calculate the area of quadrilateral $WJHL$. [3]

(d) The bearing of Lusaka from Windhoek is 060°.
Calculate the bearing of

(i) Harari from Windhoek, [1]

(ii) Windhoek from Johannesburg. [1]

(e) On a map the distance between Windhoek and Harari is 8 cm.
Calculate the scale of the map in the form $1:n$. [2]