

Problem 10

Until 1883, every city and town in the United States kept its own local time. Today, travelers reset their watches only when the time change equals 1.0 h. How far, on the average, must you travel in degrees of longitude between the time-zone boundaries at which your watch must be reset by 1.0 h? (Hint: Earth rotates 360° in about 24 h.)

Solution

Divide 360° by 24 hours to get the number of longitude degrees you must travel between time-zone boundaries.

$$\frac{360^\circ}{24 \text{ hours}} = 15^\circ \text{ per hour}$$