

Solutions

Award method and answer marks as indicated; accept equivalent correct methods.

2.1

- $D = 3.6(5) = \mathbf{18}$ km.

2.2

- Convert 14 m = 1400 cm; $l = 1400/200 = \mathbf{7}$ cm.

2.3

- Clockwise from north gives 090° and 180° .

2.4

- Subtract a half-turn: $b = 230 - 180 = \mathbf{050^\circ}$.

3.1

(a)

- $l = D/s = 12/2 = \mathbf{6}$ cm.

(b)

- **North ray at P; 6 cm ruled segment PQ clockwise 60° from north.**

(c)

- Reverse bearing: $b = 60 + 180 = \mathbf{240^\circ}$.

3.2

(a)

- Drawing length $l = 20/4 = \mathbf{5}$ cm.
- Draw this at **135° clockwise from north.**
- Reverse bearing $b = 135 + 180 = \mathbf{315^\circ}$.

(b)

- Scale value $s = D/l = 20/2.5 = \mathbf{8}$ km per cm.
- The **first map** is more enlarged: the same real distance has a longer drawn line, or fewer km per cm.