

Angle Facts (revision)

Starter

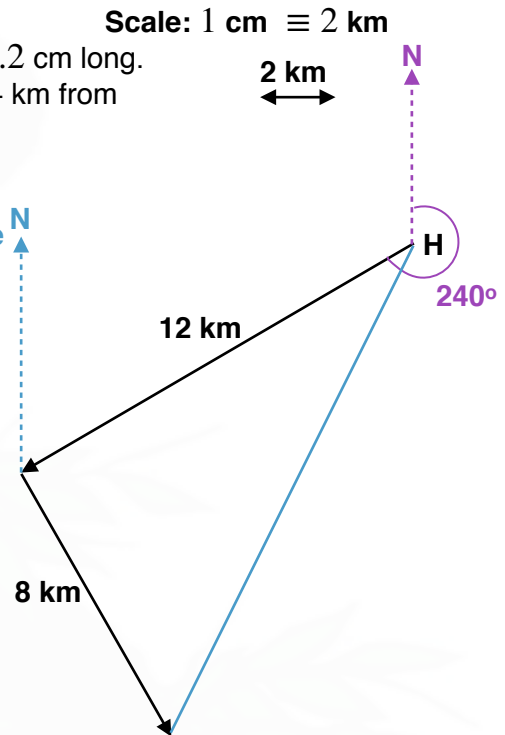
1. **(Review of last lesson)** A yacht sails from Hilton. It sails for 12 km on a course of 240° , then for 8 km on a course of 150° . Make a scale drawing to answer these questions.
- How far is the yacht now from Hilton?
 - What course should the crew of the yacht set if they would return to Hilton by the shortest route?

Working:

(a) **Return journey** — the line is about 7.2 cm long.
So the yacht is about $7.2 \times 2 = 14.4$ km from Hilton.

(b) The bearing is the angle the **blue line** makes with the **green North line** so about 026° .

Answers: 14.4 ± 0.2 m
 $026 \pm 2^\circ$



2. **(Review of previous material)**

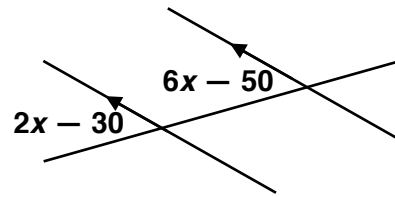
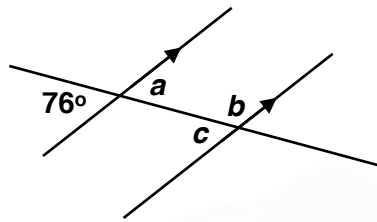
Copy and complete these statements with a word, a number or a statement:

- The angles around a point add up to $\underline{\hspace{1cm}}$.
- The angles on a straight line add up to $\underline{\hspace{1cm}}$.
- The angles in a triangle add up to $\underline{\hspace{1cm}}$.
- Vertically opposite angles are $\underline{\hspace{1cm}}$.
- Alternate angles on parallel lines are $\underline{\hspace{1cm}}$.
- Allied angles $\underline{\hspace{1cm}}$.
- Corresponding angles are $\underline{\hspace{1cm}}$.
- Supplementary angles are two angles that $\underline{\hspace{1cm}}$.

Working:

- The angles around a point add up to 360° .
- The angles on a straight line add up to 180° .
- The angles in a triangle add up to 180° .
- Vertically opposite angles are **equal**.
- Alternate angles on parallel lines are **equal**.
- Allied angles **add up to 180°** .
- Corresponding angles are **equal**.
- Supplementary angles are two angles that **add up to 180°** .

3. **(Review of previous material)** By giving reasons for your answers, calculate:
(a) the values of a , b and c . (b) the value of x .



Working:

(a) $a = 76^\circ$ *vertically opposite angles*
 $a + b = 180^\circ$ *allied angles*
So $b = 180 - 76 = 104^\circ$
 $c = a = 76^\circ$ *alternate angles*
N.B. You may have found a different way to find the angles.

(b) The two marked angles are *corresponding angles* so
 $6x - 50 = 2x - 30$
 $4x = 20$
 $x = 5^\circ$

[Solutions to Starter and E.g.s](#)

Exercise

p53 Ex 15.1 Qu 1-10 (Draw all diagram, give a reason for each step/answer)

[Textbook answers \(only available during a lockdown\)](#)