Bearings
Difficulty: Easy

Question Paper 1

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Trigonometry
Sub-Topic	Bearings
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 1

Time allowed: **24 minutes**

Score: **/19**

Percentage: **/100**

Grade Boundaries:

CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

CIE IGCSE Maths (0980)

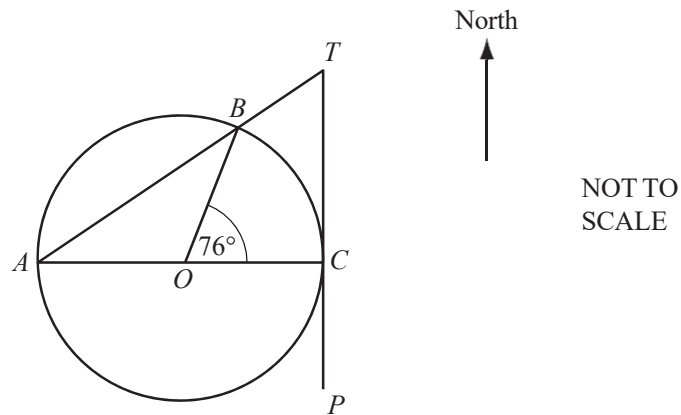| 9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

A helicopter flies from its base B to deliver supplies to two oil rigs at C and D.
C is 6 km due east of B and the distance from C to D is 8 km.
D is on a bearing of 120° from B.

North   North

B |120°   6km C

NOT TO SCALE

8km

D
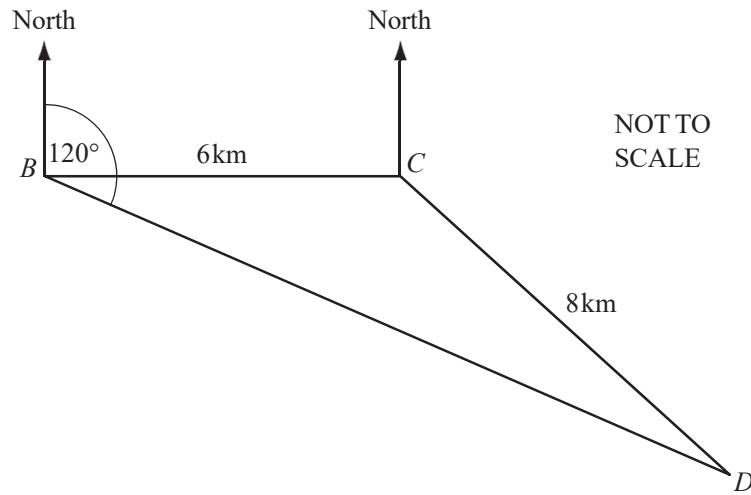
Find the bearing of D from C.   [5]

North

NOT TO
SCALE

T

B

76°

A

O

C

P

AOC is a diameter of the circle, centre *O*.
AT is a straight line that cuts the circle at *B*.
PT is the tangent to the circle at *C*.
Angle *COB* = 76°.
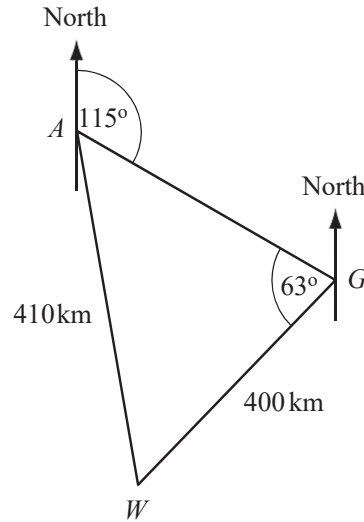
(a) Calculate angle *ATC*.   [2]

(b) *T* is due north of *C*.

    Calculate the bearing of *B* from *C*.   [2]

A plane flies from Auckland (*A*) to Gisborne (*G*) on a bearing of 115 $^{\circ}$.
The plane then flies on to Wellington (*W*). Angle *AGW* = 63 $^{\circ}$.

North

A 115°

North

63° G

NOT TO
SCALE

410km

400 km

W

(a) Calculate the bearing of Wellington from Gisborne.

[2]

(b) The distance from Wellington to Gisborne is 400 kilometres.
   The distance from Auckland to Wellington is 410 kilometres.

   Calculate the bearing of Wellington from Auckland.

[4]

From a harbour, *H*, the bearing of a ship, *S*, is 312°. The ship is 3.5 km from the harbour.

(a)   Draw a sketch to show this information.
       Label *H*, *S*, the length 3.5 km and the angle 312°.

[2]

(b) Calculate how far north the ship is of the harbour.

[2]