

Bearings

Starter

- (Review of last lesson)** A regular polygon has 17 sides. Calculate the size of one *interior* angle. Give your answers to 1 d.p.
- (Review of previous material)** The clockwise angle from North to East is 90° . Write down the clockwise angle between North and the following points on the compass:

(a) W	(b) S	(c) NE
(d) SE	(e) NW	(f) WSW

Notes

Bearings are angles that are measured *clockwise from North*. They are used to give directions and to help pinpoint the location of places.

3 rules of bearings

- Bearings are measured from the North line.
- Bearings are measured in the clockwise direction.
- Bearings are expressed with 3-figures so 60° becomes 060° .

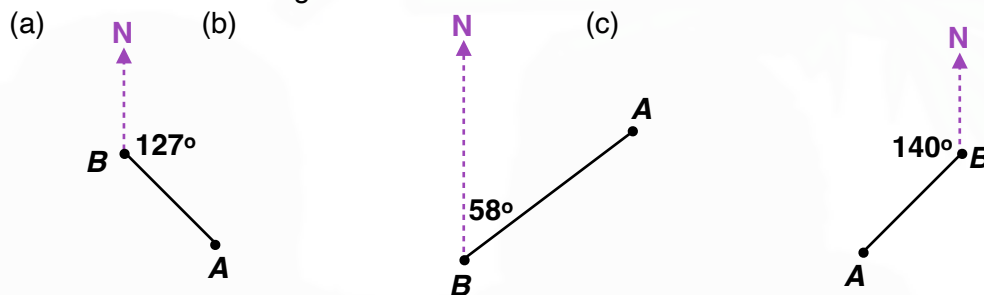
E.g. 1 Which points on the compass are the same as these bearings:

- (a) 000° (b) 225° (c) 337.5°

Working: (a) N

Geogebra: [Bearings](#)

E.g. 2 Write down the bearing of A from B.



Working: (a) 127°

Back bearings

The bearing of A from B \Rightarrow start from B (draw the North line at B)

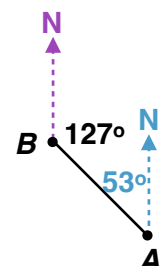
E.g. 3 For the diagrams of **E.g. 2(a)** and **E.g. 2(b)** above, calculate the bearing of B from A.

Working: “the bearing of B from A” – the “*from A*” means start from A. Therefore, a North arrow must be drawn *from A*.

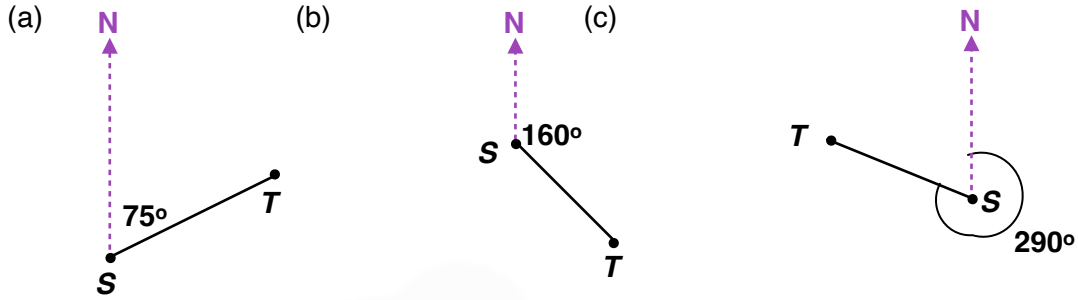
E.g. 2(a)

By allied angles, the angle between the line AB and A's North arrow is $180^\circ - 127^\circ = 53^\circ$.

So bearing of B from A is $360^\circ - 53^\circ = 307^\circ$

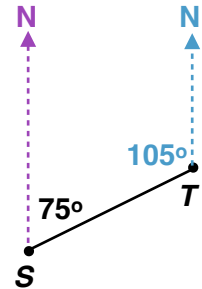


E.g. 4 What is the bearing of S from T ?



Working: “the bearing of S from T ” — the “*from T*” means start from T . Therefore, a North arrow must be drawn *from T*.

- (a) By allied angles, the angle between the line ST and T 's North arrow is $180^\circ - 75^\circ = 105^\circ$.
So the bearing of S from T is $360^\circ - 105^\circ = 255^\circ$



E.g. 5 If the bearing of P from Q is 063° , what is the bearing of Q from P ?

Hint: draw a diagram.

Video: [Bearings](#)
Video: [Back bearings](#)

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

Exercise

CIMT 8A p198 Ex 11.3 Qu 1-10

Summary

3 rules of bearings:

1. Bearings are measured from the North line.
2. Bearings are measured in the clockwise direction.
3. Bearings are expressed with 3-figures so 60° becomes 060° .

Back bearings — the bearing of A from $B \Rightarrow$ start from B (draw the North line at B).