



20 - Constructions and Bearings

Angle bisector

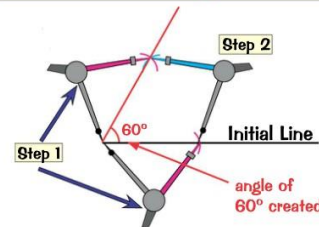
- Place compass point on centre of angle.
- Open compass and draw an arc that cuts through both lines.
- Keep compass open to the same angle. Move the compass point to one of the points where the arc crossed the line. Draw an arc in the centre.
- Keep compass open to the same angle. Move the compass point to the other point where the arc crossed the line. Draw an arc in the centre.

Using a ruler draw a straight line through the centre of the angle to the point where the two arcs cross.

Perpendicular bisector

- Place compass point on the end of the line and open to just over half way.
- Draw a semi-circle.
- Keeping your compass open at the same angle, move it to the other end of the line. Draw another semi-circle.
- Using your ruler draw a line through the two crosses that you have created.

Constructing Accurate 60° Angles



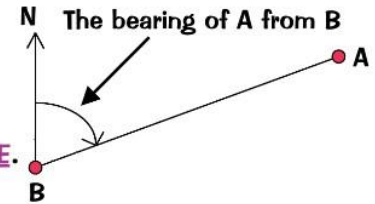
You can construct 30° angles and 45° angles by bisecting 60° and 90° angles

(Equilateral triangles have all angles that are 60°.)

Bearings

To find or plot a bearing you must remember **the three key words:**

- 'FROM'** Find the word 'FROM' in the question, and put your pencil on the diagram at the point you are going 'from'.
- NORTH LINE** At the point you are going FROM, draw in a NORTH LINE. (There'll often be one drawn for you in exam questions.)
- CLOCKWISE** Now draw in the angle CLOCKWISE from the north line to the line joining the two points. This angle is the required bearing.



Find the bearing of Q from P.

ALL BEARINGS SHOULD BE GIVEN AS 3 FIGURES
e.g. 176°, 034° (not 34°), 005° (not 5°), 018° etc.

- 'From P'
- North line at P
- Clockwise, from the N-line. This angle is the bearing of Q from P. Measure it with your protractor — 245°.

Linked Prior Topics

Constructing Triangles
Angles

Vocabulary

Construction
Perpendicular Pair
of Compasses
North

Bearings
Protractor
Clockwise
Arc

Linked Future Topics

Trigonometry
Pythagoras