

RULER AND COMPASS CONSTRUCTIONS

Do not use a protractor for any of the questions on this sheet (except possibly to check your answers)

When starting a question, make sure you allow enough space for the construction.
Do not rub out the compass marks – they are the “working” for these questions.

- 1) Draw a line AB 10 cm long. Construct the perpendicular bisector of this line.
- 2) Draw an angle of any size. Construct the bisector of this angle.
- 3) Construct an equilateral triangle with sides 8cm.
- 4) In the middle of a page, construct a triangle ABC with sides AB=9cm, BC=10cm and AC=12cm
Construct the perpendicular bisector of each of the three sides of the triangle.
These bisectors should all meet at a point. Label this point X.
You should now be able to draw a circle with the centre at X, which passes through all three vertices of the triangle.
- 5) In the middle of a page, construct a triangle ABC with sides AB=11cm, angle BAC=60° and side AC=8cm
Construct the bisector of each of the three angles of the triangle.
These bisectors should all meet at a point. Label this point O.
You should now be able to draw a circle inside the triangle, with the centre at O, and which just touches all three sides of the triangle.
- 6) Construct angles of the following sizes:
(a) 45° [Hint: Construct an angle of 90° and bisect it]
(b) 30°
- 7) Draw a circle of radius 6cm. Mark a point A on the circumference.
With the compass point on A, make an arc crossing the circle. Label this point B
With the compass point on B, make an arc crossing the circle. Label this point C
Continue around the circle, constructing points D, E and F.
What is the full name of the shape ABCDEF.
What is the size of angle ABC? angle EFC? angle ECF?

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