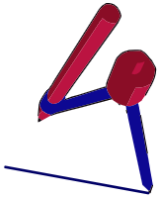


1. Constructing a perpendicular bisector

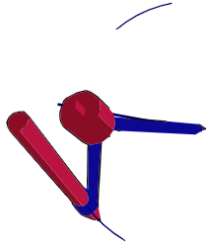
Step 1: Move your compasses to the end of the line.



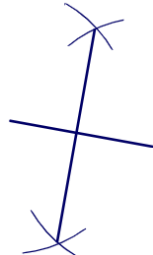
Step 3: Repeat from the other end of the line.



Step 2: Make an arc above and below the line.

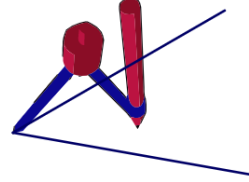


Step 4: Now draw a line through the two sets of arcs.

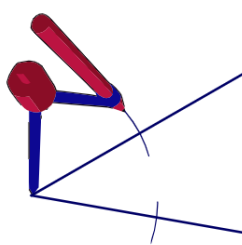


2. Constructing an angle bisector

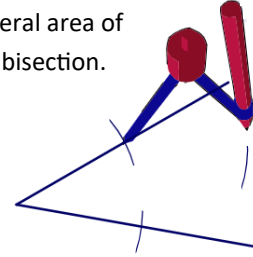
Step 1: Move your compasses to the meeting point of the lines.



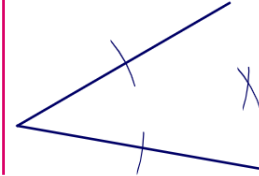
Step 2: Draw an arc on both lines.



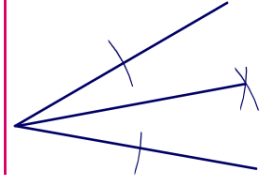
Step 3: Move the compasses to the each of the arcs on the lines in turn. Make another arc in the general area of the bisection.



Step 4: Repeat from the other arc.

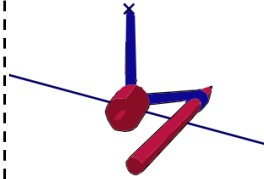


Step 5: Now draw a line from the end of your line through the arcs.

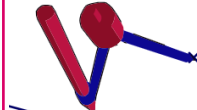


3. Perpendicular from a point to a line

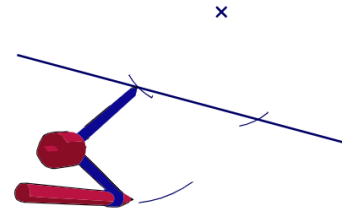
Step 1: Move your compasses to the point. Open them up so they can cross the line.



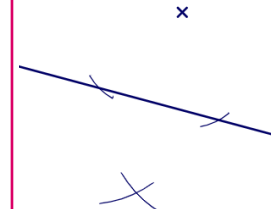
Step 2: Draw two arcs on the line.



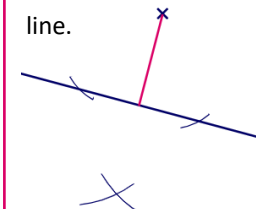
Step 3: Move your compasses to one of the arcs. Draw an arc on the other side of the line, roughly in the middle.



Step 4: Repeat this from the other arc. Don't change the compasses!



Step 5: Now draw a line from the original point to this new cross. But only to the line.

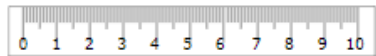


Maths, Y8 - Constructions

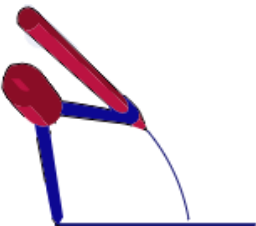
4. Constructing a triangle from 3 lengths

Draw a triangle with sides 6cm, 4cm and 3cm.

Step 1: Draw a 6cm line.



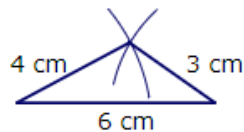
Step 2: Move the compasses to the end of the line and set them to 4cm. Draw an arc.



Step 3: Set the compasses to 3cm and move them to the other end. Make another arc.



Step 4: Join the ends of the line to the arc.

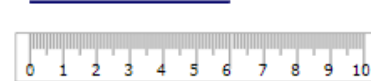


5. Construct angles of 60°

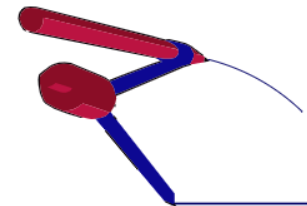
We know an equilateral triangle has three 60° angles.

So we will draw an equilateral triangle with side length 6cm.

Step 1: Draw a 6cm line.



Step 2: Move the compasses to the end of the line and set them to 6cm. Draw an arc.



Step 3: Move them to the other end. Make another arc.



Step 4: Join one end of the line to the arc.

