

Bisecting A Line Segment

If we want to bisect (cut in half) a line segment we need to construct its perpendicular (at right angles) bisector. The perpendicular bisector of a line segment cuts it at right angles and separates the line segment into two halves.

Bisect a line segment TU of length 6.4cm.

Construction

First erect the line segment TU of length 6.4cm. After that, release your compasses to more than half the length of TU. With T and U as centres, construct two pairs of arcs or curves to crisscross or intersect above and below the line segment at C and D in that order. At this instant draw a straight line passing through the points C and D to intersect TU at X. CD is the perpendicular bisector of the line segment TU. By measurement, $TX=UX=3.2\text{cm}$ and $\text{TXC}=\text{UXC}=90^\circ$

