# Constructions

Answers

**KS3 Maths topic practice**

This topic online

| Q | Answer | Marks |
|---|---|---|
| 1 | Arcs of equal radius (more than 4 cm) drawn from A and from B, crossing above and below AB; the straight line through the two crossing points is the perpendicular bisector, cutting AB at its midpoint at 90 degrees | 2 |
| 2 | Arc from B crossing both arms, equal arcs from those two points crossing inside the angle, line from B through the crossing; each half measures 38° (accept 36° to 40°) | 2 |
| 3 | Draw AB = 7 cm; arcs of radius 5 cm from A and from B cross at C; joining AC and BC gives the required isosceles triangle | 2 |
| 4 | Base 6 cm, arcs of radius 6 cm from each end crossing at the third vertex; each angle is 60° | 2 |
| 5 | Equal arcs from M crossing the line either side at X and Y, then larger equal arcs from X and Y crossing above the line; the line through M and that crossing point is perpendicular to the original line at M | 2 |
| 6 | Arc from A crossing AB at X, arc of the same radius from X crossing the first arc; the line from A through that crossing point makes 60° with AB | 2 |
| 7 | An arc from P crossing the line at two points, then arcs of equal radius from those two points crossing below the line; the line from P through that crossing point is perpendicular to the original line | 2 |
| 8 | Construct the perpendicular to the line at A (90°), then bisect the 90° angle; the bisector makes 45° with the line | 3 |
| 9 | **a)** open: The perpendicular from T to the fence, found by an arc from T cutting the fence twice and equal arcs from those points crossing on the other side<br>**b)** open: The shortest distance from a point to a line is along the perpendicular, which meets the line at 90° | 3 |
| 10 | AB = 7 cm drawn, 60° at A constructed with two arcs of equal radius, C marked 5 cm along that line with compasses, then C joined to B | 3 |
| 11 | **a)** open: PQ = 8 cm; 45° at P by bisecting a constructed right angle; 60° at Q by two equal arcs; R where the lines cross<br>**b)** 75° | 4 |
| 12 | **a)** open: PR = 8 cm drawn; arcs of radius 5 cm from P and from R cross above the line at Q and below at S; join PQ, QR, RS, SP<br>**b)** 6 cm | 4 |


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Full worked solutions, written out by hand, are on the solutions sheet for this topic.


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