


## Topic 10 Constructions and loci (Post-TT) [18] MARKSCHEME

- 1.
- |   |    |     |
|---|----|-----|
| 70° drawn at P                                  | B1 |     |
| $\pm 2^\circ$                                   |    |     |
| 30° stated or drawn                             | B1 |     |
| <i>if drawn, Allow <math>\pm 2^\circ</math></i> |    |     |
| triangle correct                                | B1 | [3] |
- 2.
- |   |    |  |
|---|----|--|
| Both arcs intersecting  | B2 |  |
| correct radius and region shaded or indicated                 |    |  |
| <i>B1 for either arc, correct radius <math>\pm 2mm</math></i> |    |  |
- 3.
- |   |    |     |
|---|----|-----|
| Arcs on PQ and RQ and equal intersecting arcs | M1 |     |
| <i>Allow if arcs drawn from P and R</i>       |    |     |
| Bisector accurate to $\pm 2^\circ$            | A1 |     |
| <i>59.5 to 63.5</i>                           |    |     |
|   |    | [2] |
- 4.
- |  |    |     |
|--|----|-----|
| Arc drawn from any one vertex                                | M1 |     |
| <i>5 cm <math>\pm</math> 4 mm</i>                            |    |     |
| Arcs drawn from all vertices                                 | M1 |     |
| <i>as above</i>  |    |     |
| Correct area shaded  | A1 |     |
| <i>Must be 5 cm <math>\pm</math> 2 mm arcs for this mark</i> |    |     |
|  |    | [3] |
- 5.
- |     |  |    |     |
|-----|--|----|-----|
|     | (a) Pairs of intersecting arcs above and / or below AB                           | M1 |     |
|     | <i>Must be attempt at common radius for each pair</i>                            |    |     |
|     | <i>Accept construction on any side</i>   |    |     |
|     | Accurate perpendicular bisector  | A1 |     |
|     | <i>Within 2 mm of mid-point</i>  |    |     |
|     | <i>and within <math>2^\circ</math> of perpendicular</i>                          |    |     |
| (b) | (i) Perpendicular bisector of AC   | B1 |     |
|     | or BC  |    |     |
|     | <i>Same tolerance and conditions as above</i>                                    |    |     |
|     | (ii) Complete circle centred on point of intersection of perpendicular bisectors | M1 |     |
|     | Correct circle drawn within 2 mm   | A1 |     |
|     |  |    | [5] |

6.

**N.B.** For this question, your diagram must look similar to the one below i.e. you must have constructed a perpendicular to the line EF from D, but your distance may not be the same as the answer below.

 <p>Correct measurement <math>\pm 2</math> mm</p>	<p><b>3</b> 1 A01.3a 2 A02.3b</p>	<p><b>B1</b> for correct perpendicular from D to EF <b>B1</b> for correct supporting arcs for perpendicular bisector from D to EF</p> <p><b>B1</b> for correct measurement of their line</p>	<p>Note to centres: This answer will depend on the actual size of the printed question paper</p>
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