Practice worksheet | Geometry and proof

Construction/spatial algorithms

Name: _____ Date: _____

6 questions | 16 marks

1. Draw a segment AB of length 6 cm. Use ruler and compass to construct its perpendicular bisector. Leave your construction arcs visible. [3 marks]



2. A segment is 12 cm long. Which radii 4, 6 and 8 cm produce two equal-circle intersections? [2 marks]

3. Explain why each arc intersection is equidistant from A and B in this construction. [2 marks]

4. Give a coordinate check for the perpendicular bisector of A=(−2, 1), B=(6, 1). [3 marks]

5. A student measures the midpoint with a ruler and then draws an approximate perpendicular. Is this the same as proving a compass construction? Explain. [3 marks]

6. List one input condition and one output condition for an algorithm constructing a square from side AB. [3 marks]