Practice worksheet | Geometry and transformations

Testing/refining construction algorithms

Name: _____ Date: _____

6 questions | 18 marks

1. Test radius r=5 cm on segment AB=10 cm for the usual two-crossing bisector. [3 marks]

2. A factor-2 enlargement rule doubles x but leaves y unchanged. Test P(2,3). [3 marks]

3. Why is P(4,0) a poor only test for the faulty factor-2 rule (x,y)→(2x,y)? [3 marks]

4. Test the midpoint rule $((x_1+x_2)/2,(y_1+y_2)/2)$ on A(−4,2), B(2,8). [2 marks]

5. A factor-1/2 rule rounds every image coordinate to a whole number. Test P(1,3) and refine the rule. [3 marks]

6. Give three useful types of test for a bisector construction and explain why tests alone are not a proof. [4 marks]