Practice worksheet | Geometry and proof

Connected deductive arguments

Name: _____ Date: _____

6 questions | 16 marks

1. In triangle $ABC, AB = AC$. D is the midpoint of BC. Prove triangles ABD and ACD congruent. [3 marks]

2. Use the previous conditions to prove $AD \perp BC$. [3 marks]

3. A proof says "$AB = CD$ because the picture looks symmetric." Explain why this is insufficient. [2 marks]

4. Prove that an angle in a semicircle is 90° using the centre-angle theorem. [3 marks]

5. Triangles ABC and DEF are similar with correspondence $A \leftrightarrow D, B \leftrightarrow E, C \leftrightarrow F$. $AB = DE$. Prove they are congruent. [3 marks]

6. A student verifies a circle claim for three drawings and calls it proved. What is still needed? [2 marks]