Minimum spanning trees including Prim's algorithm

Name: _____ Date: _____

6 questions | 12 marks

1. Find a minimum spanning tree for A-B (3), A-C (4), B-C (2). [2 marks]

2. Can all three sides of a triangle form a tree on its three vertices? [2 marks]

3. A connected selection has 5 vertices and 4 edges. What must be checked before calling it a spanning tree of the original network? [2 marks]

4. Prim has reached A and B. Candidates are A-C (7), B-D (5), C-D (1). What is next? [2 marks]

5. A minimum tree costs 120 dollars. Adding a backup link between two existing vertices costs 18 dollars. Give the new cost and explain whether the selection remains a tree. [2 marks]

6. Two spanning trees have the same minimum total 24 but different edges. Must one be wrong? [2 marks]