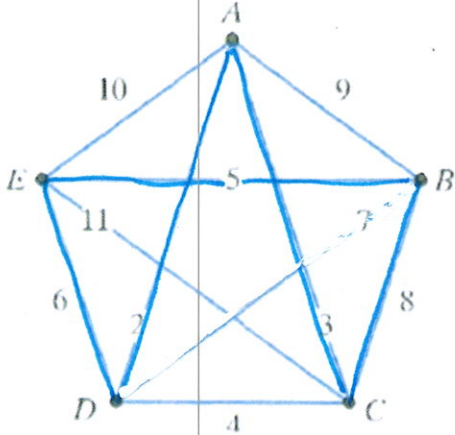


Instructions: Show all work. Use exact answers unless otherwise directed to round.

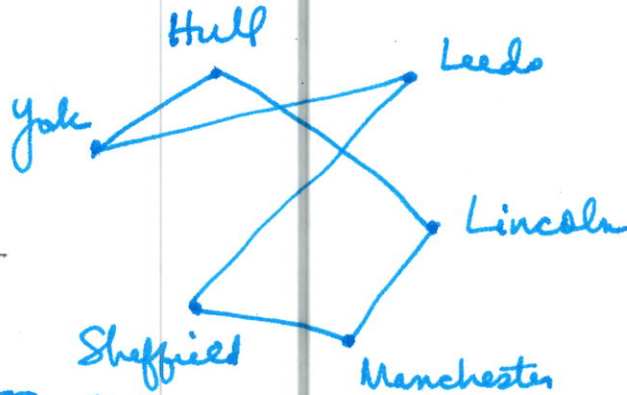
1. Use Cheapest Link to find the (approximately) lowest cost Hamilton Circuit.



$$2 + 3 + 5 + 6 + 8 = 24$$

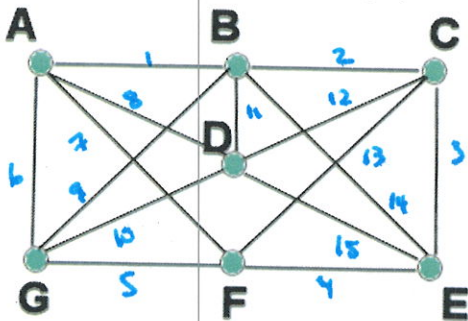
2. Use Cheapest Link to find the (approximately) lowest cost Hamilton Circuit.

HULL					
40	LEEDS				
47	72	LINCOLN			
97	44	85	MANCHESTER		
64	36	17	39	SHEFFIELD	
38	24	80	71	57	YORK



$$24 + 38 + 36 + 39 + 47 + 85 = 269$$

3. What is the redundancy of the graph shown?



7 vertices
 6 needed for tree
 15 on graph
 $15 - 6 = 9$ is redundancy

4. If a tree has 25 vertices, how many edges must it have?

24