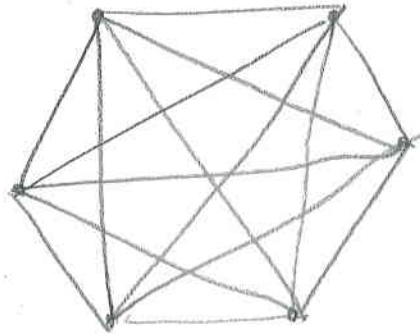


1. Define a complete graph.

a complete graph has an edge connecting every vertex to every other vertex ~ i.e. each vertex has degree $(n-1)$

2. Draw an example of a complete graph with six vertices. How many unique Hamilton circuits are there (don't find them, just say how many)?

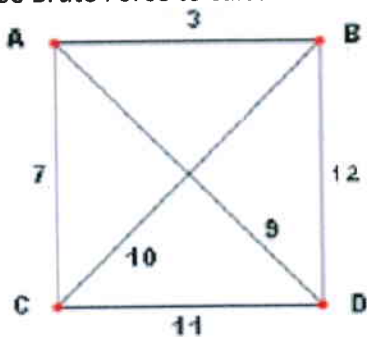


$$n=6$$

$$\frac{(6-1)!}{2} = \frac{5!}{2} = \frac{120}{2}$$

$$= 60$$

3. Use Brute Force to calculate the cheapest Hamilton circuit on the graph below.



3 circuits

$$A B C D A = 3 + 10 + 11 + 7 = 33$$

$$A B D C A = 3 + 12 + 11 + 7 = 33$$

$$* A C B D A = 7 + 10 + 12 + 3 = 32$$

$$\frac{(4-1)!}{2} = \frac{6}{2} = 3$$

* cheapest