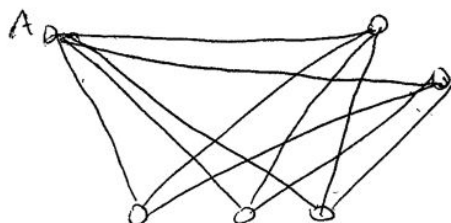# Mathematics 2602
Quiz 7
Prof. Margalit
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Let $K_{r,s,t}$ denote the graph with r red vertices, s blue vertices, and t green vertices, and where there is an edge connecting two vertices if and only if they have different colors.

1. Draw a picture of $K_{1,2,3}$. You do not need to indicate the colors in any way.

2. Is $K_{1,2,3}$ Eulerian?

Eulerian $\Leftrightarrow$ all degrees are even.

no, as deg A = 5

3. For which values of r, s, and t is $K_{r,s,t}$ Eulerian?

Eulerian $\Leftrightarrow$ all degrees are even.

Possible degrees in $K_{r,s,t}$ are $r+s$, $r+t$, $s+t$.

These are all even when either r,s,t all even or all odd.