

YOUR NAME

YOUR PENN EMAIL ADDRESS

April 23, 2022

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To receive full credit all your answers should be carefully justified. Each solution must be written independently by yourself - **no collaboration is allowed**. There are 2 problems for 20 points. You have 3.5 hours.

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1. [10 pts] What is the minimum number of nodes in a cycle?

**Solution.**

3

2. [10 pts] How many degrees does an isolated node have?

**Solution.**

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