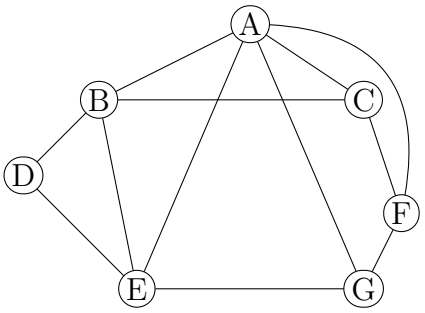
CS 173, Fall 18 Examlet 7, Part B

Name: _____

NetID: _____ **Lecture: B**

Discussion: Friday 11 12 1 2 3 4

1. (9 points) What is the chromatic number of the graph below? Justify your answer.



2. (6 points) Check the (single) box that best characterizes each item.

Chromatic number of a bipartite graph with at least one edge: 1 ☐ 2 ☐ 3 ☐ can't tell ☐

Suppose I want to estimate $\frac{103}{20}$. 3 is ____: an upper bound ☐ an exact answer ☐ a lower bound ☐ not a bound on ☐

$\sum_{k=3}^{n} k^7$ $\sum_{p=1}^{n-2} p^9$ ☐ $\sum_{p=1}^{n-2} k^7$ ☐ $\sum_{p=1}^{n-2} k^9$ ☐ $\sum_{p=1}^{n-2} (p+2)^7$ ☐

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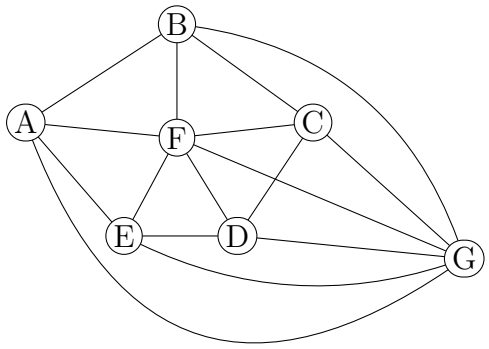

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Chromatic number of W_n. 2 ☐ 3 ☐ ≤ 3 ☐ ≤ 4 ☐

All elements of M are also elements of X. $M = X$ ☐ $M \subseteq X$ ☐ $X \subseteq M$ ☐

$\sum_{k=0}^{n} \frac{1}{2^k}$ $1 - (\frac{1}{2})^{n-1}$ ☐ $2 - (\frac{1}{2})^{n}$ ☐ $1 - (\frac{1}{2})^{n}$ ☐ $2 - (\frac{1}{2})^{n-1}$ ☐