

Name: _____

1. Define the relation \sim on the set of all integers \mathbf{Z} by $a \sim b$ if and only if $|b-a| < 10$.
Is \sim an equivalence relation? Why or why not?

2. Let G be a graph with n vertices such that every vertex has degree at most 3. Provide an upper bound (do not use O-notation) on the number of edges G can have. Justify your answer with a result from class.