

Graph Theory Weekly Problems 4

Due: 5 Feb 2024 at Midnight EST as a PDF on Submitty

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1. We have some tree T with $\Delta(T) = k$ and l leaves. If we assume that $l = k$, show that there exists a decomposition of T comprised of k paths of arbitrary length, all of which share some common endpoint. (4 pts)
2. Next, give an upper and lower bound on the diameter of T with respect to $|V(T)|$ and k . (4 pts)