

Why  $\langle s, p_1, \dots, p_{k-1} \rangle$  must be a most degree-central shortest path between  $s$  and  $p_{k-1}$  if  $\mathcal{N}(\langle s, p_1, \dots, p_k, t \rangle)$  is a most degree-central shortest path between  $s$  and  $t$ ?

