反馈与讨论

2014/12/10

12.2

- A. Find the radius and diameter of Cn for n>=3.

- B. Find the radius and diameter of Pn for n>=3. What is the center of Pn?

- C. Find the radius and diameter of Qn for n>=2.

12.4

- Find the radius and diameter of the Petersen graph PG. What is the center of PG?

12.6

- Prove that if G is a disconnected graph, then diam(G')<=2.

12.10

- A. Prove theorem 12.3: Let u and v be adjacent vertices in a connected graph G. Then $|d(u,x)-d(v,x)|<=1$ for every vertex x of G.

- B. Let G be a connected graph and suppose that $d(u,x)=k$ for some u, x $\in$ V(G). Show that if v is a neighbor of u, then $d(v,x)$ is k-1, k, or k+1.

12.16-12.18

- What is the periphery of P_n for n >=2?
- What is the periphery of the Petersen graph?

12.20

- Give an example of a connected graph whose center and periphery are distinct but not disjoint or explain why no such examples exist.

12.26

- For the graph G of Figure 12.14, determine
- (a) the set of peripheral vertices of G,
- (b) the set of eccentric vertices of G,
- (c) the set of boundary vertices of G,
- (d) the periphery, eccentric subgraph and boundary of G.