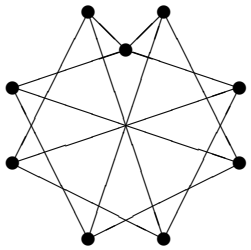
Name ..... row .... col....

1. There exists a graph with degree sequence $(7, 7, 6, 4, 4, 4, 2, 2)$	....
2. There exists a graph with degree sequence $(6, 6, 6, 6, 6, 6, 2, 2, 2, 2, 2, 2)$	
3. Graph G_1 has an Euler tour	
4. Graph G_1 has a Hamilton cycle	
5. $\kappa(G_1) =$	
6. $\kappa'(G_1) =$	
7. Every 4-connected eulerian graph is hamiltonian	
8. There exists a graph G such that: $\|G\| = 100,\ \kappa(G) = 10,\ \kappa'(G) = 20, \delta(G) = 21$	
9. Every eulerian graph is 2-connected	
10. If a graph on n vertices with n edges has two cycles then it is disconnected	

11. Show that if graph G on n vertices is k-connected than $\text{diam}G \leq \frac{n}{k}$, where
$\text{diam}G = \max\{\text{dist}(u, v) : u, v \in V(G)\}$,
$\text{dist}(u, v)$ - is a length of the shortest $u - v$-path,
(hint Menger theorem).
12. Show, that if $\delta(G) \geq \frac{n+1}{2}$ then $\kappa(G) \geq 3$.

G_1



Name ....., row .... col....

1. There exists a graph with degree sequence $(6,6,6,6,6,6,2,2,2,2,2,2)$	....
2. There exists a graph with degree sequence $(7,7,6,4,4,4,2,2)$	
3. Graph G_1 has a Hamilton cycle	
4. Graph G_1 has an Euler tour	
5. $\kappa'(G_1) =$	
6. $\kappa(G_1) =$	
7. There exists a graph G such that: $\lvert G\rvert = 100,\ \kappa(G) = 10,\ \kappa'(G) = 20, \delta(G) = 23$	
8. Every 4-connected eulerian graph is hamiltonian	
9. If a graph on n vertices with n edges has two cycles then it is disconnected	
10. Every eulerian graph is 2-connected	

11. Show that if graph G on n vertices is k-connected than $\mathrm{diam}G \leq \frac{n}{k}$, where
$\mathrm{diam}G = \max\{\mathrm{dist}(u,v) : u,v \in V(G)\}$,
$\mathrm{dist}(u,v)$ - is a length of the shortest $u-v$-path,
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12. Show, that if $\delta(G) \geq \frac{n+1}{2}$ then $\kappa(G) \geq 3$.

G_1