Statistics on Families of Graphs

	P_n	C_n	K_n	$K_{m,n}$	W_n	St_n	$\square_n$
$\lvert V(G)\rvert$ Number of vertices	$n+1$	n	n	$m+n$	$n+1$	$n+1$	2^n
$\lvert E(G)\rvert$ Number of edges	n	n	$\binom{n}{2}$	mn	$2n$	n	$n \cdot 2^{n-1}$
$\delta(G)$ min vtx degree			$n-1$	$\min(m,n)$			
$\Delta(G)$ max vtx degree	$0 \quad n=1$ $1 \quad n=1$ $2 \quad n \geq 2$		$n-1$	$\max(m,n)$			
$\kappa(G)$ connectivity				$\min(m,n)$			
$\kappa'(G)$ edge connectivity					3		
$\omega(G)$ clique number		$3 \quad n=3$ $2 \quad n \geq 4$			$4 \quad n=3$ $3 \quad n \geq 4$		
$\alpha(G)$ max indep set	$\frac{n+2}{2}$ even $\frac{n+1}{2}$ odd			$\max(m,n)$		n	
g(G) min cycle length				$4 \quad n,m \geq 2$ $\infty \quad$ other			
diam(G) max vtx distance	n	$\frac{n}{2}$ even $\frac{n-1}{2}$ odd			2		
Is G regular?							
Is G bipartite?							

Statistics on Individual Graphs

	P Petersen	Gr Grötzsch	T Tetrah.	C Cube	O Octoh.	I Icosah.	D Dodecah.
$\|V(G)\|$ Number of vertices	10	11	4	8	6	12	20
$\|E(G)\|$ Number of edges	15	20	6	12	12	30	30
$\delta(G)$ min vtx degree		3					
$\Delta(G)$ max vtx degree		5					
$\kappa(G)$ connectivity							
$\kappa'(G)$ edge connectivity			3				
$\omega(G)$ clique number							
$\alpha(G)$ max indep set					2	3	8
g(G) min cycle length	5				3		
diam(G) max vtx distance	2	3				3	5
Is G regular?							
Is G bipartite?							