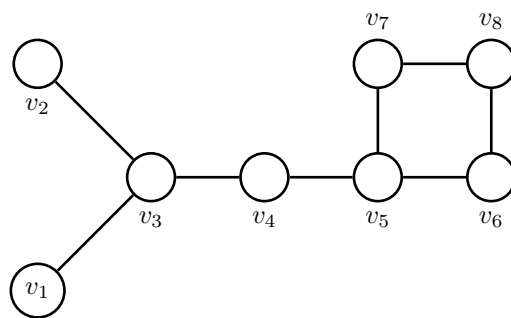
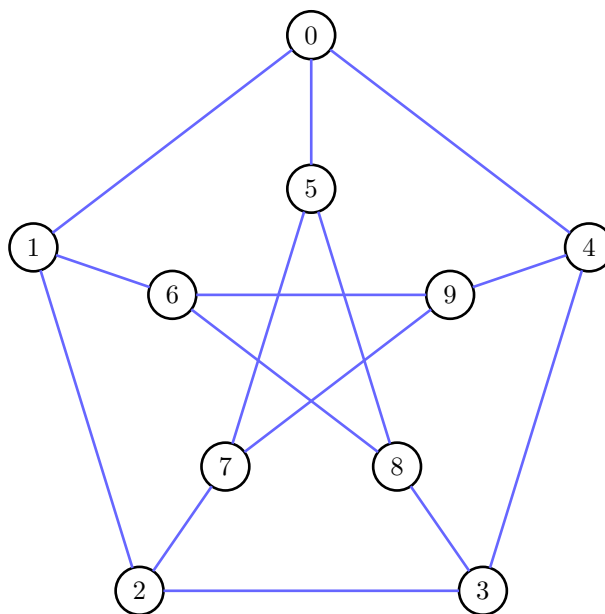


Here's a graph where you specify the position of the vertices. Note that the label is placed inside unless specified:



But Sage has knowledge of graph theory and you can use it to specify graphs and determine various characteristics. For example:

The Petersen graph below has 10 vertices and 15 edges.



The chromatic number is $\chi(G) = 3$. The maximum size independent set is $\beta(G) = 4$. One such set is $[0, 3, 6, 7]$. The maximum size clique has $\omega(G) = 2$ vertices; e.g., $[7, 9]$. The diameter is 2 and the radius is 2.