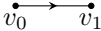


$v_0$



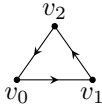
A single vertex labeled  $v_0$  is shown as a black dot with the label  $v_0$  positioned directly below it.

$v_0 \rightarrow v_1$



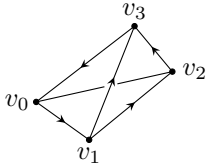
A directed edge from  $v_0$  to  $v_1$  is shown as a horizontal line with an arrow pointing to the right. The vertices are labeled  $v_0$  and  $v_1$  below them.

$v_0 \rightarrow v_1 \rightarrow v_2 \rightarrow v_0$



A directed cycle graph with three vertices  $v_0$ ,  $v_1$ , and  $v_2$  is shown. The vertices are arranged in a triangle. The edges are directed:  $v_0 \rightarrow v_1$  (bottom edge),  $v_1 \rightarrow v_2$  (right edge), and  $v_2 \rightarrow v_0$  (left edge). The vertices are labeled  $v_0$ ,  $v_1$ , and  $v_2$  below them.

$v_0 \rightarrow v_1 \rightarrow v_2 \rightarrow v_3 \rightarrow v_0$



A directed cycle graph with four vertices  $v_0$ ,  $v_1$ ,  $v_2$ , and  $v_3$  is shown. The vertices are arranged in a diamond shape. The edges are directed:  $v_0 \rightarrow v_1$  (bottom-left edge),  $v_1 \rightarrow v_2$  (bottom-right edge),  $v_2 \rightarrow v_3$  (top-right edge), and  $v_3 \rightarrow v_0$  (top-left edge). The vertices are labeled  $v_0$ ,  $v_1$ ,  $v_2$ , and  $v_3$  below them.