Graphs using LaTeX

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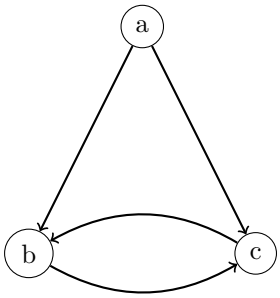
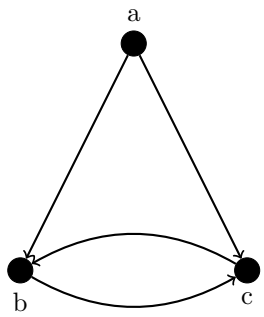
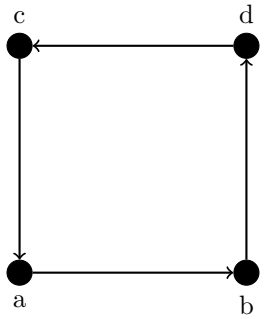


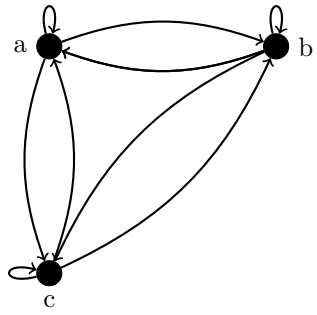

```
\begin{tikzpicture}[fill=white]
        \path (1.5,3) node(a)[circle, draw
        ↪  , fill]{a}
        (0,0) node(b)[circle, draw,
        ↪  fill]{b}
        (3,0) node(c)[circle, draw,
        ↪  fill]{c};
        \draw [thick, black,->] (a)--(b);
        \draw [thick, black,->] (a)--(c);
        \draw [thick, black,->, bend
        ↪  right=30] (b) to (c);
        \draw [thick, black,->, bend
        ↪  right=30] (c) to (b);
\end{tikzpicture}
```



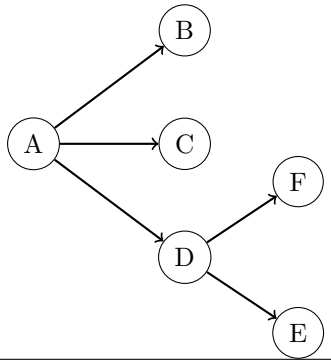

```
\begin{tikzpicture}[fill=black]
    \path
        (1.5,3) node(a)[circle, draw,
        ↪  fill, label=a]{}
        (0,0) node(b)[circle, draw, fill,
        ↪  label=below:b]{}
        (3,0) node(c)[circle, draw, fill,
        ↪  label=below:c]{};
    \draw [thick, black, ->] (a) -- (b);
    \draw [thick, black, ->] (a) -- (c);
    \draw [thick, black, ->, bend
    ↪  right=30] (b) --(c);
    \draw [thick, black, ->, bend
    ↪  right=30] (c) --(b);
\end{tikzpicture}
```



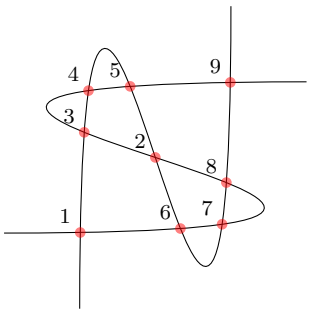

```
        \begin{tikzpicture}[fill=black]
                \path (0,0)
                ↪  node(a)[circle,draw,
                ↪  fill,label=below:a] {}
                (3,0) node(b)[circle,draw,
                ↪  fill,label=below:b] {}
                (0,3) node(c)[circle,draw,
                ↪  fill,label=above:c] {}
                (3,3) node(d)[circle,draw,
                ↪  fill,label=above:d]
                ↪  {};
                \draw[thick,black,->]
                ↪  (a)--(b);
                \draw[thick,black,->]
                ↪  (b)--(d);
                \draw[thick,black,->]
                ↪  (d)--(c);
                \draw[thick,black,->]
                ↪  (c)--(a);
        \end{tikzpicture}
```



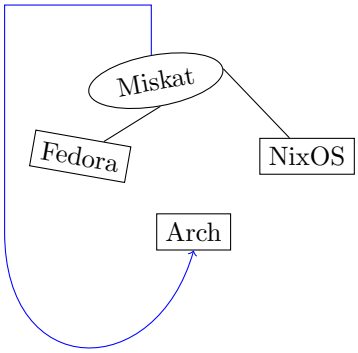

```
\begin{tikzpicture}[fill=black]
            \path (0,0) node(c)[circle, draw,fill,
            ↪  label=below:c]{}
            (0,3) node(a)[circle,draw,fill, label=left:a]{}
            (3,3) node(b)[circle,draw,fill, label=right:b]{};
            \draw[thick,black,->, bend left=20] (a) to (b);
            \draw[thick,black,->, bend left=20] (b) to (a);
            \draw[thick,black,->, bend left=20] (b) to (a);
            \draw[thick,black,->, bend right=20] (a) to (c);
            \draw[thick,black,->, bend right=20] (c) to (a);
            \draw[thick,black,->, bend right=20] (c) to (b);
            \draw[thick,black,->, bend right=20] (b) to (c);
            \draw[thick,black,->, loop above] (a) to (a);
            \draw[thick,black,->, loop above] (b) to (b);
            \draw[thick,black,->, loop left] (c) to (c);

\end{tikzpicture}
```




```
    \begin{tikzpicture}[fill=white]
            \path (0,1.5) node(a)[circle,draw,fill]{A}
            (2,3) node(b)[circle,draw,fill]{B}
            (2,1.5)node(c)[circle,draw,fill]{C}
            (2,0)node(d)[circle,draw,fill]{D}
            (3.5,-1) node(e)[circle,draw,fill]{E}
            (3.5,1) node(f)[circle,draw,fill]{F};
            \draw [thick,black,->] (a) to (b);
            \draw [thick,black,->] (a) to (c);
            \draw [thick,black,->] (a) to (d);
            \draw [thick,black,->] (d) to (e) ;
            \draw [thick,black,->] (d) to (f);
    \end{tikzpicture}
```




```
    \begin{tikzpicture}
            \clip (-2,-2) rectangle (2,2);
            \draw [name path=curve 1] (-2,-1) .. controls
            ↪  (8,-1) and (-8,1) .. (2,1);
            \draw [name path=curve 2] (-1,-2) .. controls
            ↪  (-1,8) and (1,-8) .. (1,2);
            \fill [name intersections={of=curve 1 and curve 2,
            ↪  name=i, total=\t}]
            [red, opacity=0.5, every node/.style={above left,
            ↪  black, opacity=1}]
            \foreach \s in {1,...,\t}{(i-\s) circle (2pt) node
            ↪  {\footnotesize\s}};
    \end{tikzpicture}
```




```
\begin{tikzpicture}[fill=white]
      \path (4,4)
      ↪  node(a)[ellipse,draw,fill,rotate=10]{Miskat}
      (3,3) node(b) [rectangle,
      ↪  draw,fill,rotate=-10]{Fedora}
      (6,3) node(c) [rectangle,draw,fill]{NixOS}
      (4.5,2) node(d) [rectangle,draw,fill]{Arch};
      \draw (a.south) -- (b);
      \draw (a.east) -- (c);
      \draw [blue,->](a.north) |-(2,5) -- (2,2) ..
      ↪  controls (2,0) and (4,0) .. (d.south);
\end{tikzpicture}
```
