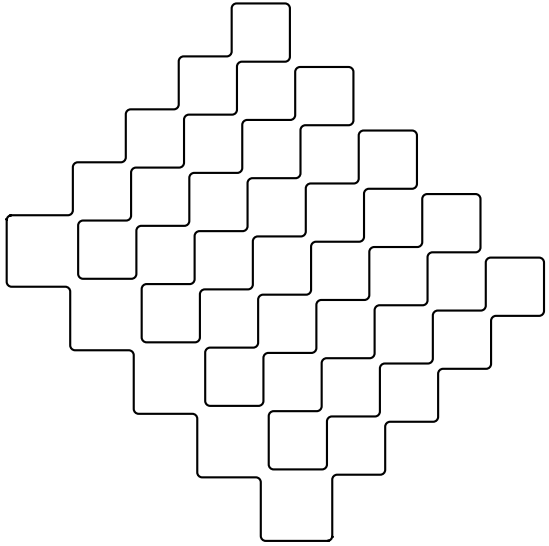
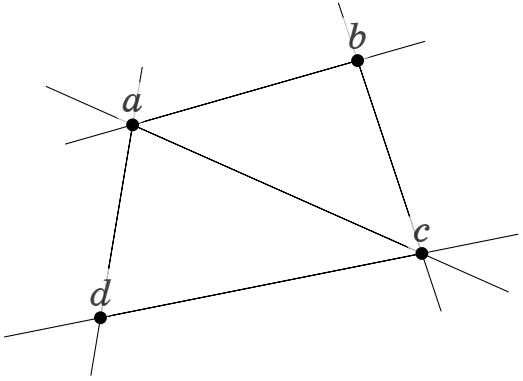
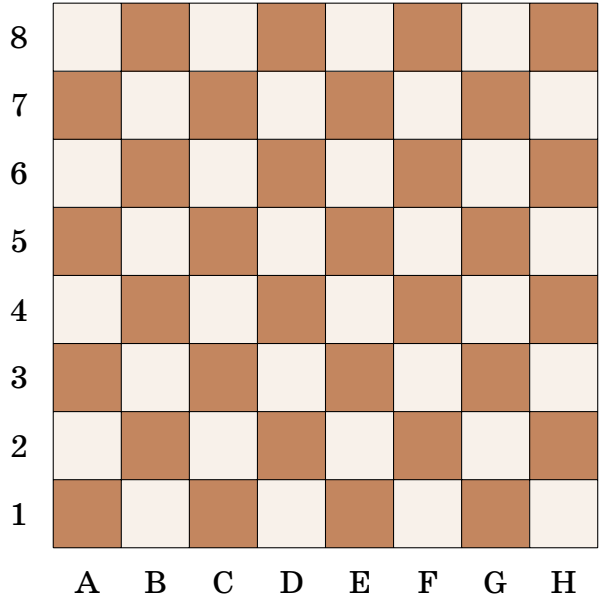


```
\newcommand{\sz}{4}

\draw[thick,rounded corners=0.65mm]
  (0,0)
  \foreach \t in {0,...,{\sz}} {
    --  ++(0.55,0)  --  ++(0,0.5)
    \foreach \i in {2,...,{\sz}}
        {--  ++(0.5,0)  --  ++(0,0.5)}
    --  ++(0.55,0)  --  ++(0,-0.55)
    \foreach \i in {2,...,{\sz}}
        {--  ++(-0.5,0)  --  ++(0,-0.5)}
    --  ++(-0.5,0)  --  ++(0,-0.55)
  }

  --  ++(0,-0.075)  --  ++(-0.075,0)

  \foreach \t in {0,...,{\sz}}
      {--  ++(-0.6,0)  --  ++(0,0.6)}

  --  ++(0,0.075)  --  cycle;
```

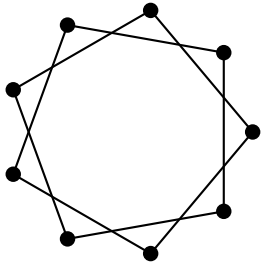



```
\newcommand{\namenode}[1]{
  \draw (#1) node[above,circle,
        fill=white,fill opacity=0.75,
        inner sep=0.35ex]{{\large $#1$}}
    node[circle,fill=black,inner sep=0.6mm](#1){ }; }

\newcommand{\lconnect}[2]{\draw (#1) -- (#2)
   coordinate[pos=-0.3](#1f#2)
   coordinate[pos=1.3](#2f#1)
     (#1f#2) -- (#2f#1); }

\coordinate (a) at (0.5,3);  \coordinate (b) at (4,4);
\coordinate (c) at (5,1);    \coordinate (d) at (0,0);

\lconnect{a}{b}   \lconnect{b}{c}   \lconnect{c}{d}
\lconnect{d}{a}   \lconnect{a}{c}

\namenode{a} \namenode{b} \namenode{c} \namenode{d}
```

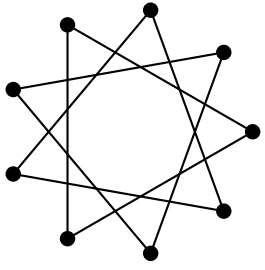



```
\foreach \x in {0,...,7}
  \foreach \y in {0,...,7} {
    \ifthenelse{\intcalcMod{\x+\y}{2}=0}
      {\fill[RawSienna!55!white]}
      {\fill[RawSienna!5!white]}
            (\x,\y) rectangle ++(1,1);
  }

\foreach \i in {1,...,8} {
  \node (a\i) at (\i-0.5, -0.5) {\AlphAlph{\i}};
  \node (d\i) at (-0.5, \i-0.5) {\i};
}

\draw[step=1cm, black] (0,0) grid (8,8);
```

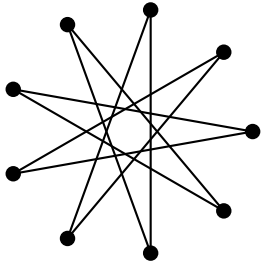
$(9, 2)$



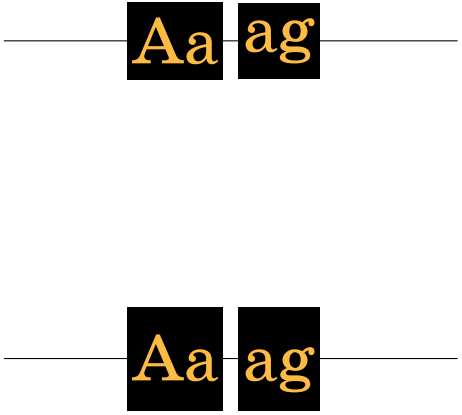
$(9, 3)$



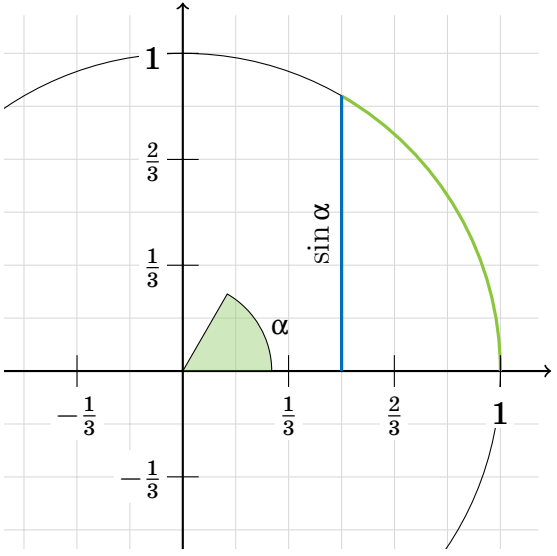
$(9, 4)$



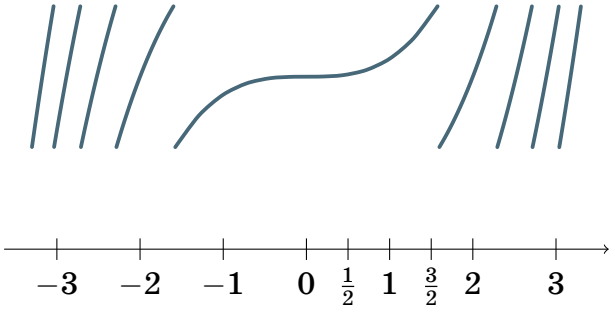
```
\foreach \j in {2,3,4} {
  \begin{scope}[yshift=-4.3 * \j cm]
    \draw (-1.6,1.4) node[left]{\( (9,\j) \)};

    \foreach \i in {0,...,8} {

      \fill[black] (360/9 * \i : 1.6cm)
        circle[radius=1mm];

      \draw[thick] (360/9 * \i : 1.6cm) --
        ({360/9 * (\i + \j)} : 1.6cm);

    }
  \end{scope}
}
```




```
\draw (-2.5,0) -- (2.5,0);

\draw (-0.08,0) node[Dandelion,fill=black,left,
    rectangle,inner xsep=0.6mm,inner ysep=2mm]{\Huge Aa};

\draw (0.08,0) node[Dandelion,fill=black,right,
    rectangle,inner xsep=0.6mm,inner ysep=2mm]{\Huge ag};

\draw (-2.5,-3.5) -- (2.5,-3.5);

\draw (-0.08,-3.5) node[Dandelion,fill=black,left,
    rectangle,inner xsep=0.6mm,inner ysep=2mm,
    text height=4ex,text depth=1ex]{\Huge Aa};

\draw (0.08,-3.5) node[Dandelion,fill=black,right,
    rectangle,inner xsep=0.6mm,inner ysep=2mm,
    text height=4ex,text depth=1ex]{\Huge ag};
```

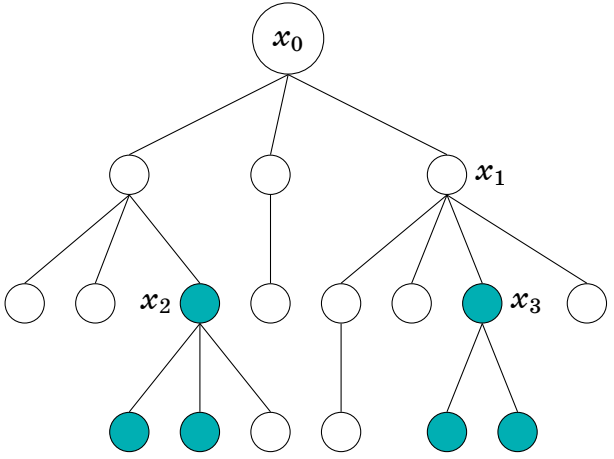



```
\clip (-0.56,-0.56) rectangle (1.16,1.16);

\foreach \x in {-6,...,6} {
  \draw[thin,black!15!white]  (-1.12, \x/6) --
    (1.12, \x/6) (\x/6, -1.12) -- (\x/6, 1.12);}
\draw[thick,->] (-1.16,0)--(1.16,0);
\draw[thick,->] (0,-1.16)--(0,1.16);
\draw (0,0) circle[radius=1cm];

\draw[very thick,LimeGreen] (0:1cm) arc (0:60:1cm);
\draw[very thick,NavyBlue] (60:1cm) -- (60:1cm |- 0,0)
   node[black,midway,above,rotate=90] {$\sin \alpha$};

\filldraw[fill=YellowGreen,fill opacity=0.45,
   draw=black] (0,0) -- (0.28,0) arc (0:60:0.28)
   node[black,anchor=south west,inner sep=0.3ex,
   pos=0.35,text opacity=1]{$\alpha$} -- cycle;

\foreach \t / \ttext in {1, -1, 0.333 / \frac13,
  -0.333 / -\frac13, 0.666 / \frac23} {
  \draw (\t,0.05) -- (\t,-0.05) node[below,fill=white,
        inner sep=0.3ex,text height=2.2ex]{$\ttext$};
  \draw (0.05,\t) -- (-0.05,\t) node[left, fill=white,
        inner sep=0.3ex,text height=2.2ex]{$\ttext$};}
```




```
\begin{tikzpicture}[xscale=1.1,yscale=1.9,
     declare function={
         sdrob(\x) = Mod(\x+0.5, 1) - 0.5;
         main(\x) = (0.5 * \x)^3;
         invmain(\x) = \x^(1/3) * 2;}]

  \draw[->] ({invmain(-6)}, -1.2)
         -- ({invmain(6)}, -1.2);

  \foreach \x / \xtext in {0 / 0, -1 / -1,
    0.5 / \frac{1}{2}, 1.5 / \frac{3}{2},
    1 / 1, 2 / 2, 3 / 3, -2 / -2, -3 / -3}
   {\draw (\x cm,-11.25 mm) -- (\x cm,-12.75 mm)
      node[below, text height=1.6ex]{$\xtext$};}

  \foreach \t in {-4,...,4} {
    \draw[domain=invmain(\t-0.49):invmain(\t+0.49),
          variable=\x, samples=12, Cyan!35!black,
          line cap=round, line width=0.5mm,
          smooth] plot({\x}, {sdrob(main(\x))});
  }
\end{tikzpicture}
```

A Tree:




```
\newcommand{\tblue}{fill=TealBlue}

\begin{forest} for tree={circle,draw,l=1.7cm,%
  s sep=4mm,minimum size=2.7ex,inner sep=0.5ex}
    [$x_0$,alias=ROOT
      [
        [ ,before drawing tree={x-=0.45cm}]
        [ ,before drawing tree={x-=0.45cm}]
        [ ,\tblue,alias=X2
          [ ,\tblue]   [ ,\tblue]   [ ]]
      ]   [ [ ]]
      [ ,alias=X1
        [ [ ]]   [ ]
        [ ,\tblue,alias=X3
          [ ,\tblue]   [ ,\tblue]]
        [ ,before drawing tree={x+=0.45cm}]
      ]
    ]
  \node[left=-0.05cm of X2]{$x_2$};
  \node[right=-0.05cm of X3]{$x_3$};
  \node[right=-0.05cm of X1]{$x_1$};
  \node[above=0.5cm of ROOT]{A Tree:};
\end{forest}
```