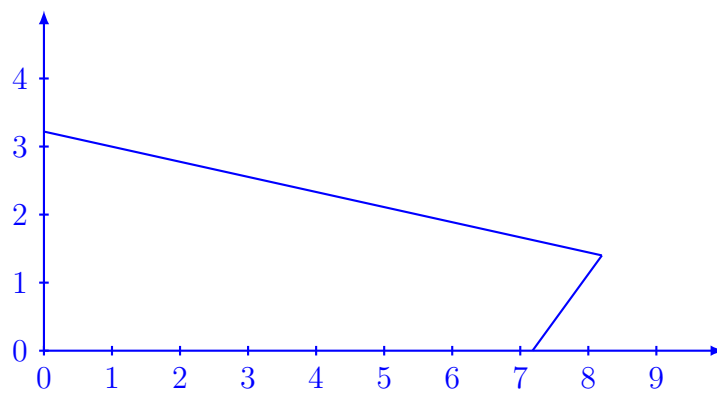


## List of Figures

1	domain-01.tex: Polygon . . . . .	2
2	domain-02.tex: Polygon with lattice . . . . .	3
3	domain-03.tex: Filled polygon with directions . . . . .	4
4	domain-04.tex: Filled polygon with axes . . . . .	4
5	domain-05.tex: Filled and anotated rectangle . . . . .	5
6	domain-06.tex: Polygon and level lines . . . . .	6
7	domain-07.tex: Feasible set with equations with Pgfplots .	7
8	domain-08.tex: Feasible set with equations with Pgfplots .	8
9	domain-09.tex: Feasible set with equations with Pgfplots .	9
10	domain-10.tex: Feasible set with pattern . . . . .	10
11	domain-11.tex: Feasible set with directions . . . . .	11
12	domain-12.tex: Ellipsis and circle . . . . .	12
13	domain-13.tex: Feasible set with pattern . . . . .	13
14	domain-14.tex: Feasible set with pattern . . . . .	14
15	domain-15.tex: Polygon with level lines and vertices . . .	15
16	domain-16.tex: Cylinder . . . . .	16
17	domain-17.tex: Grid and intersection . . . . .	17
18	domain-18.tex: Complex domain with vertices . . . . .	18
19	domain-19.tex: Domain with level lines . . . . .	19
20	domain-20.tex: Complex map . . . . .	20



```

\begin{tikzpicture}[blue,thick,scale=0.9]
  \draw[>,-latex] (0,0) -- (10,0) ;
  \draw[>,-latex] (0,0) -- (0,5) ;

  \draw (0,3.22)--(8.2,1.4) ;
  \draw (8.2,1.4)--(7.18,0) ;

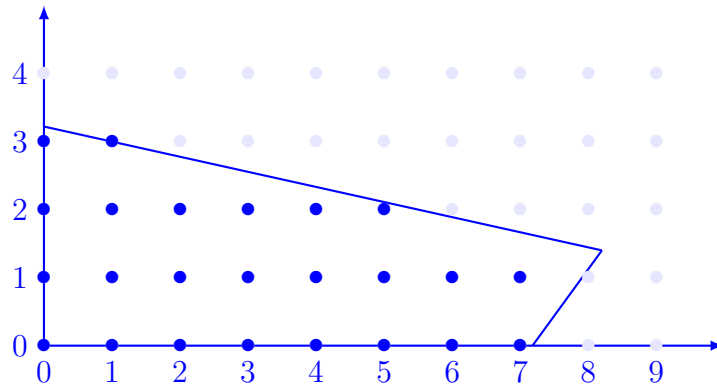
  \foreach \x/\xtext in {0,1,...,9} {
    \draw[shift={(\x,0)}] (0pt,2pt) -- (0pt,-2pt) node[below]
      {\xtext$};
  }

  \foreach \y/\ytext in {0,1,...,4} {
    \draw[shift={(0,\y)}] (2pt,0pt) -- (-2pt,0pt) node[left]
      {\ytext$};
  }
\end{tikzpicture}

```

---

Figure 1: domain-01.tex: Polygon



```

\begin{tikzpicture}[blue,thick,scale=0.9]
\draw[>,-latex] (0,0) -- (10,0) ;
\draw[>,-latex] (0,0) -- (0,5) ;

\draw (0,3.22) -- (8.2,1.4) ;
\draw (8.2,1.4) -- (7.18,0) ;

\foreach \x/\xtext in {0,1,...,9} {
  \draw[shift={(\x,0)}] (0pt,2pt) -- (0pt,-2pt) node[below]
    {\xtext};
}

\foreach \y/\ytext in {0,1,...,4} {
  \draw[shift={(0,\y)}] (2pt,0pt) -- (-2pt,0pt) node[left]
    {\ytext};
}

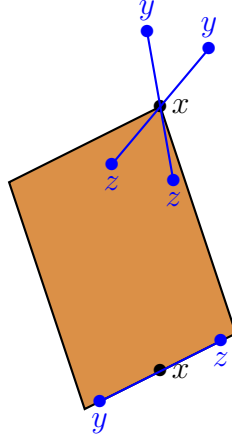
\foreach \k in {0,1,...,9} {
  \foreach \l in {0,1,...,4} {
    \draw(\k,\l) node[blue!10] {$\bullet$};
  }
}

\foreach \k in {0,1,...,7} {
  \draw(\k,0) node {$\bullet$};
}
\foreach \k in {0,1,...,7} {
  \draw(\k,1) node {$\bullet$};
}
\foreach \k in {0,1,...,5} {
  \draw(\k,2) node {$\bullet$};
}
\foreach \k in {0,1} {
  \draw(\k,3) node {$\bullet$};
}

\end{tikzpicture}

```

Figure 2: domain-02.tex: Polygon with lattice




---

```

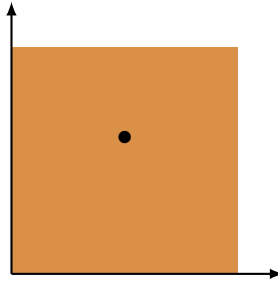
\definecolor{cof}{RGB}{219, 144, 71}
\begin{tikzpicture}[thick]
  \coordinate (A1) at (0, 0);
  \coordinate (A2) at (2, 1);
  \coordinate (A3) at (1, 4);
  \coordinate (A4) at (-1, 3);

  \draw[fill=cof, opacity=0.6] (A1) -- (A2) -- (A3) -- (A4) --cycle;
  \draw (A3) node {$\bullet$} node[right] {$x$} ;
  \draw[blue] (A3) -- ++(50:1) node {$\bullet$} node[above] {$y$};
  \draw[blue] (A3) -- ++(230:1) node {$\bullet$} node[below] {$z$};
  \draw[blue] (A3) -- ++(100:1) node {$\bullet$} node[above] {$y$};
  \draw[blue] (A3) -- ++(280:1) node {$\bullet$} node[below] {$z$};
  \draw (1, 0.5) node {$\bullet$} node[right] {$x$} ;
  \draw[blue] (0.2, 0.1) node {$\bullet$} node[below]
    {$y$} -- (1.8, 0.9) node {$\bullet$} node[below] {$z$};
\end{tikzpicture}

```

---

Figure 3: domain-03.tex: Filled polygon with directions




---

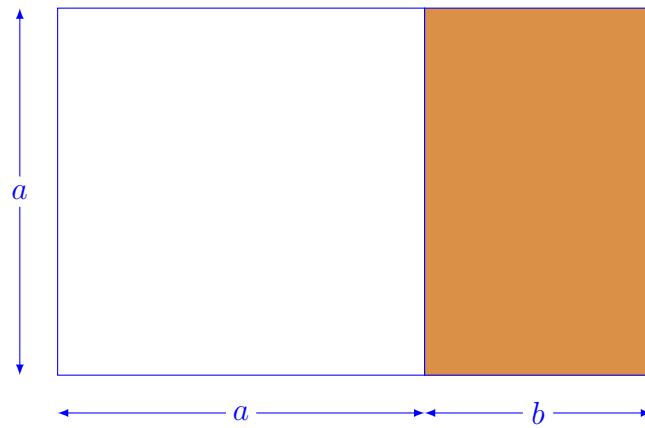
```

\definecolor{cof}{RGB}{219, 144, 71}
\begin{tikzpicture}[scale=3]
  \fill[fill=cof, opacity=0.1] (0, 0) -- (0, 1) -- (1, 1) -- (1, 0);
  \draw[thick, -latex] (0, 0) --(0, 1.2) ;
  \draw[thick, -latex] (0, 0) -- (1.2, 0) ;
  \draw (0.5, 0.6) node {$\bullet$} ;
\end{tikzpicture}

```

---

Figure 4: domain-04.tex: Filled polygon with axes



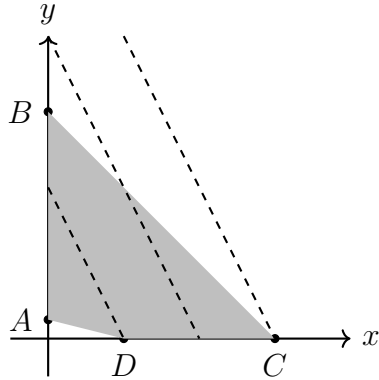
```

\definecolor{cof}{RGB}{219, 144, 71}
\begin{tikzpicture}[blue]
  \def \b {3}
  \def \a {\b * 1.618}
  \def \c {\a + \b}
  \def \m {\c / 2}

  \draw (0, 0) rectangle (\a, \a);
  \draw[fill=cof] (\a, 0) rectangle (\c, \a);
  \draw (\a / 2, -0.5) node {\$a\$} ;
  \draw[-latex] (\a / 2 + 0.2, -0.5) -- (\a, -0.5) ;
  \draw[-latex] (\a / 2 - 0.2, -0.5) -- (0, -0.5) ;
  \draw (\a + \b / 2, -0.5) node {\$b\$} ;
  \draw[-latex] (\a + \b / 2 + 0.2, -0.5) -- (\c, -0.5) ;
  \draw[-latex] (\a + \b / 2 - 0.2, -0.5) -- (\a, -0.5) ;
  \draw (-0.5, \a / 2) node {\$a\$} ;
  \draw[-latex] (-0.5, \a / 2 + 0.2) -- (-0.5, \a) ;
  \draw[-latex] (-0.5, \a / 2 - 0.2) -- (-0.5, 0) ;
\end{tikzpicture}

```

Figure 5: domain-05.tex: Filled and anotated rectangle



```

\begin{tikzpicture}
\draw[>, thick] (-0.5, 0)--(4, 0) node[right]{$x$};
\draw[>, thick] (0, -0.5)--(0, 4) node[above]{$y$};

\node[
  circle,
  draw=black,
  fill=black,
  inner sep=0pt,
  minimum size=3pt,
  label=below:{$D$}
] (d) at (1, 0) {};

\node[
  circle,
  draw=black,
  fill=black,
  inner sep=0pt,
  minimum size=3pt,
  label=below:{$C$}
] (c) at (3, 0) {};

\node[
  circle,
  draw=black,
  fill=black,
  inner sep=0pt,
  minimum size=3pt,
  label=left:{$B$}
] (b) at (0, 3) {};

\node[
  circle,
  draw=black,
  fill=black,
  inner sep=0pt,
  minimum size=3pt,
  label=left:{$A$}
] (a) at (0, 0.25) {};

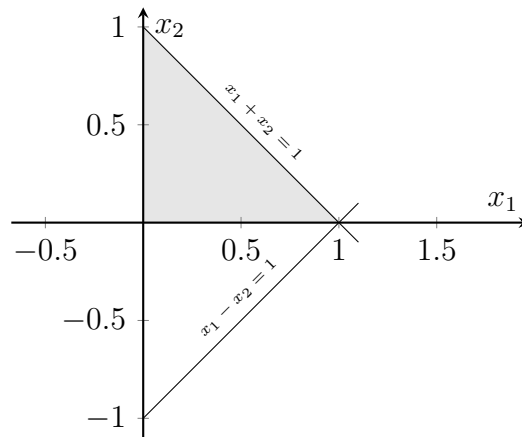
\fill[
  opacity=0.5,
  gray!50
] (1, 0) -- (3, 0) -- (0, 3) -- (0, 0.25) -- cycle;

\draw[dashed, thick] (0, 2) -- (1, 0);
\draw[dashed, thick] (0, 4) -- (2, 0);
\draw[dashed, thick] (1, 4) -- (3, 0);

\end{tikzpicture}

```

Figure 6: domain-06.tex: Polygon and level lines



```

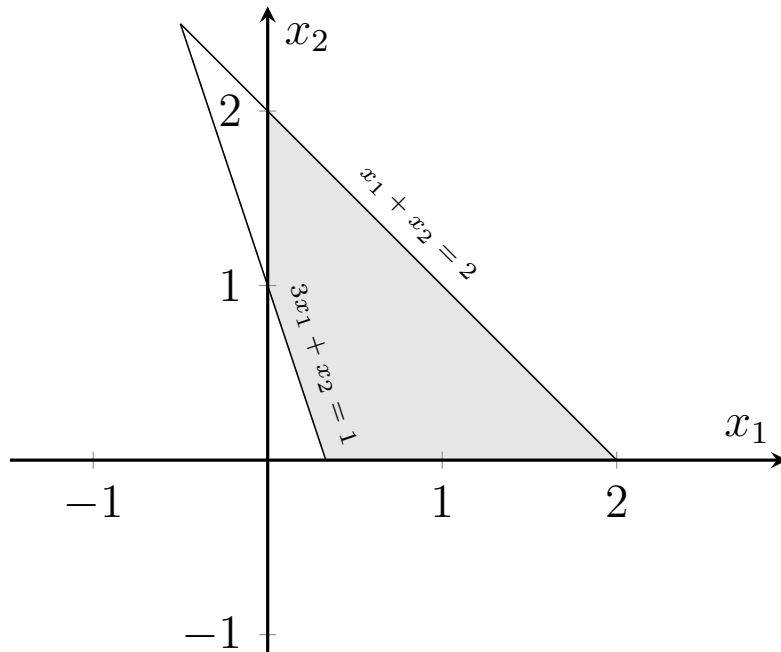
\begin{tikzpicture}
  \begin{axis}[
    xlabel={x_1},
    ylabel={x_2},
    axis on top=true,
    axis equal,
    axis lines=middle,
    samples=41,
    thick,
    xmin=-0.1,
    xmax=1.4,
    ymin=-1.1,
    ymax=1.1,
  ]
    \addplot[
      thick,
      color=gray!20,
      fill=gray!20,
      fill opacity=0.05
    ] coordinates {
      (0, 1)
      (1, 0)
      (0, 0)
    };

    \addplot[
      color=black,
      thin,
      domain=0:1.1
    ] {1 - x} node[pos=0.5, sloped, above] {\tiny $x_1+x_2=1$};

    \addplot[
      color=black,
      thin,
      domain=0:1.1
    ] {x - 1} node[pos=0.5, sloped, above] {\tiny $x_1-x_2=1$};
  \end{axis}
\end{tikzpicture}

```

Figure 7: domain-07.tex: Feasible set with equations with Pgfplots



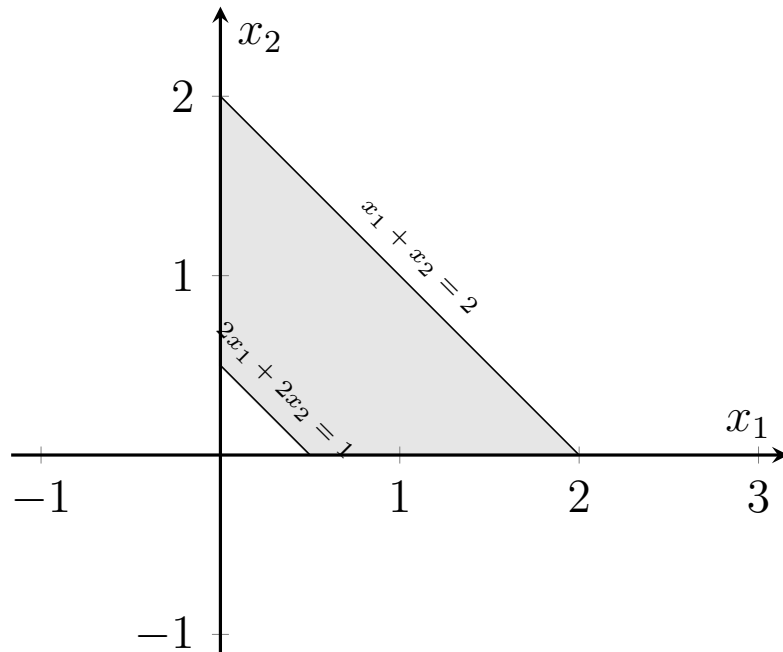
```

\begin{tikzpicture}[scale=1.5]
\begin{axis}[
  xlabel={$x_1$},
  ylabel={$x_2$},
  axis on top=true,
  axis equal,
  axis lines=middle,
  samples=41,
  thick,
  xmin=-0.6,xmax=2.1,
  ymin=-1.1,ymax=2.6
]
\addplot[
  thick,
  color=gray!20,
  fill=gray!20,
  fill opacity=0.05
] coordinates {
  (1/3, 0) (2, 0) (0, 2) (0, 1)
};
\addplot[
  color=black,
  thin,
  domain=-0.5:2
] {2-x} node[pos=0.5, sloped, above] {\tiny $x_1+x_2=2$};
\addplot[
  color=black,
  thin,
  domain=-0.5:0.33333
] {1-3*x} node[pos=0.8, sloped, above] {\tiny $3x_1+x_2=1$};
\end{axis}
\end{tikzpicture}

```

Figure 8: domain-08.tex: Feasible set with equations with Pgfplots



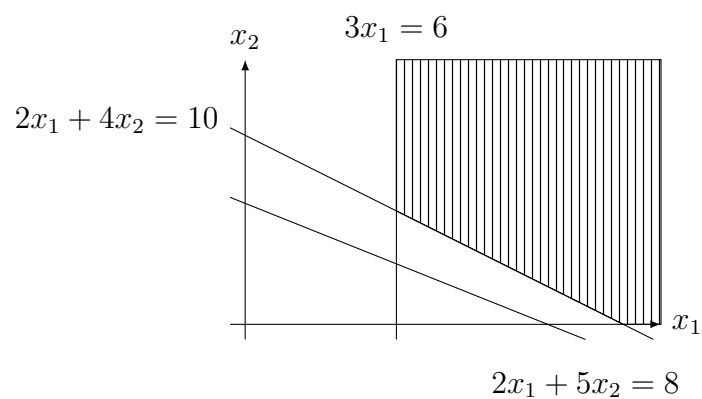


```

\begin{tikzpicture}[scale=1.5]
\begin{axis}[
  xlabel={$x_1$},
  ylabel={$x_2$},
  axis on top=true,
  axis equal,
  axis lines=middle,
  samples=41,
  thick,
  xmin=-0.1,xmax=2.1,
  ymin=-1.1,ymax=2.5,
]
\addplot[
  thick,
  color=gray!20,
  fill=gray!20,
  fill opacity=0.05
] coordinates {
  (2, 0) (1/2, 0) (0, 1/2) (0, 2)
};
\addplot[
  color=black,
  thin,
  domain=0:2
] {2-x} node[pos=0.5, sloped, above] {\tiny $x_1+x_2=2$};
\addplot[
  color=black,
  thin,
  domain=0:0.5
] {0.5-x} node[pos=0.5, sloped, above] {\tiny $2x_1+2x_2=1$};
\end{axis}
\end{tikzpicture}

```

Figure 9: domain-09.tex: Feasible set with equations with Pgfplots




---

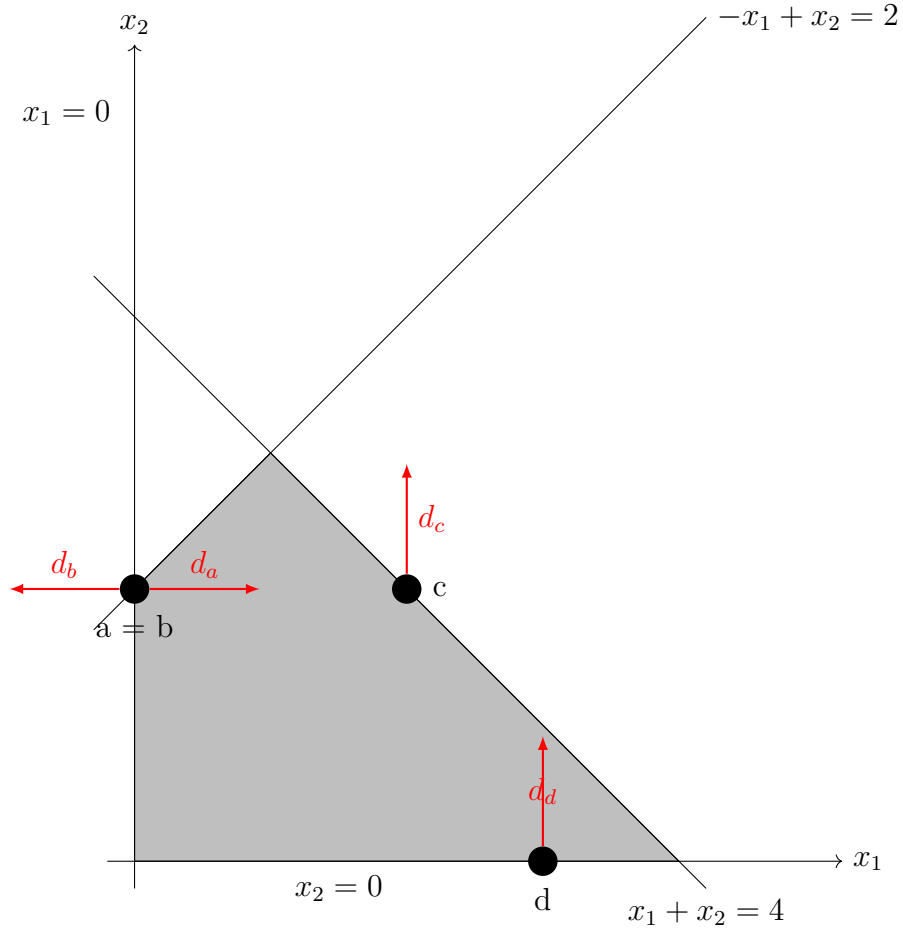
```

\begin{tikzpicture}
  \draw[-latex] (-0.2, 0) -- (5.5, 0) node[right] {$x_1$};
  \draw[-latex] (0, -0.2) -- (0, 3.5) node[above] {$x_2$};
  \draw[black] (2, -0.2) -- (2, 3.5);
  \node at (2, 3.9) {$3x_1 = 6$};
  \draw[black] (-0.2, 2.6) -- (5.4, -0.2);
  \node at (-1.7, 2.7) {$2x_1 + 4x_2 = 10$};
  \draw[black] (-0.2, 1.68) -- (4.5, -0.2);
  \node at (4.5, -0.8) {$2x_1 + 5x_2 = 8$};
  \draw[pattern=vertical lines]
    (2, 1.5) -- (2, 3.5) -- (5.5, 3.5) -- (5.5, 0) -- (5, 0) -- cycle;
\end{tikzpicture}

```

---

Figure 10: domain-10.tex: Feasible set with pattern

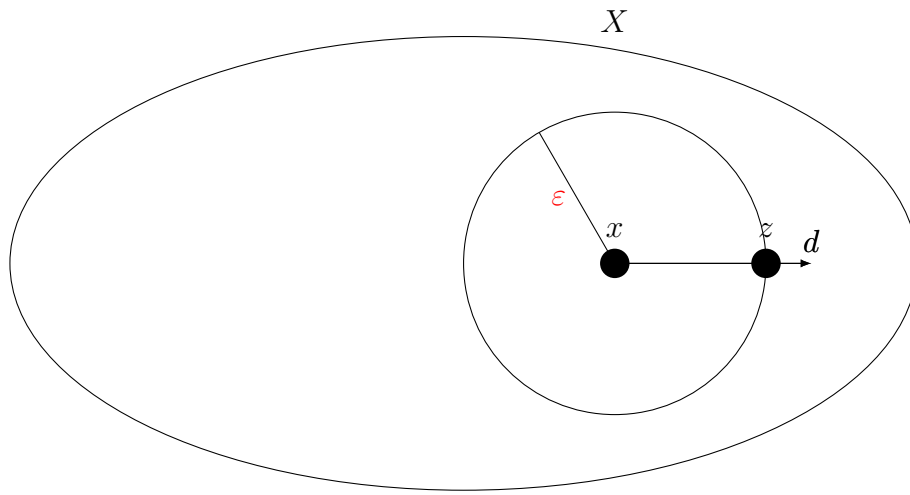


```

\begin{tikzpicture}[scale=1.8, domain=-0.3:4.2, range=-0.4:6]
\draw[fill=lightgray] (0, 0) -- (0, 2) -- (1, 3) -- (4, 0) -- cycle;
\draw[>-] (-0.2, 0) -- (5.2, 0) node[right] {$x_1$};
\draw[>-] (0, -0.2) -- (0, 6) node[above] {$x_2$};
\draw[color=black] plot (\x, \x+2) node[right] {$-x_1 + x_2 = 2$};
\draw[color=black] plot (\x, 4-\x) node[below] {$x_1 + x_2 = 4$};
\node at (1.5, -0.2) {$x_2 = 0$};
\node at (-0.5, 5.5) {$x_1 = 0$};
\node (A) at (0, 2) [circle, fill, label=below:{a = b}] {};
\node (da) at (1, 2) {};
\draw[-latex, color=red, thick] (A) -- (da) node[midway, text=red, above] {$d_a$};
\node (db) at (-1, 2) {};
\draw[-latex, color=red, thick] (A) -- (db) node[midway, text=red, above] {$d_b$};
\node (C) at (2, 2) [circle, fill, label=right:c] {};
\node (dc) at (2, 3) {};
\draw[-latex, color=red, thick] (C) -- (dc) node[midway, text=red, right] {$d_c$};
\node (D) at (3, 0) [circle, fill, label=below:d] {};
\node (dd) at (3, 1) {};
\draw[-latex, color=red, thick] (D) -- (dd) node[midway, text=red] {$d_d$};
\end{tikzpicture}

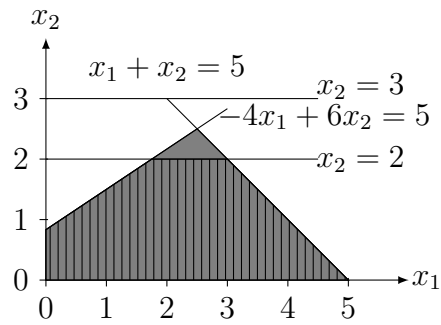
```

Figure 11: domain-11.tex: Feasible set with directions



```
\begin{tikzpicture}[scale=2]
  \tikzstyle{Cir}=[circle, minimum width=11pt, draw, inner sep=0pt]
  \draw (0, 0) ellipse[x radius=3, y radius= 1.5];
  \node[at={(1, 1.6)}] {X};
  \node[at={(1, 0)}, circle, fill, label=$x$] {};
  \node[at={(2, 0)}, circle, fill, label=$z$] {};
  \draw (1, 0) circle[radius=1];
  \draw [Circle-] (1, 0) -- node[left, red] {\varepsilon} (60:1);
  \draw[-latex] (1, 0) -- (2.3, 0) node[above] {$d$};
  \draw[-latex] (1, 0) -- (2.3, 0) node[above] {$d$};
\end{tikzpicture}
```

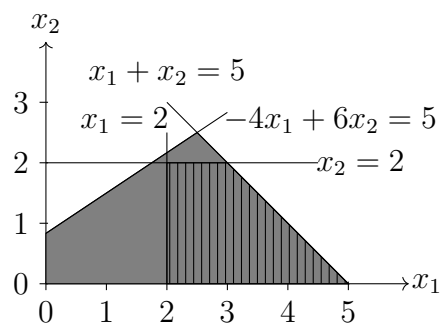
Figure 12: domain-12.tex: Ellipsis and circle



```
\begin{tikzpicture}[scale=0.8]
\draw[-latex] (0, 0) -- (6, 0);
\draw[-latex] (0, 0) -- (0, 4);
\node at (6.3, 0) {$x_1$};
\node at (0, 4.3) {$x_2$};
\foreach \x in {0, ..., 5} {
\draw (\x, 1pt) -- (\x, -3pt) node[anchor=north] {\x};
}
\foreach \y in {0, ..., 3} {
\draw (1pt, \y) -- (-3pt, \y) node[anchor=east] {\y};
}
\draw[
fill=gray,
opacity=0.3
] (0, 0) -- (0, 5/6) -- (2.5, 2.5) -- (5, 0) -- cycle;
\draw[
pattern=vertical lines
] (0, 0) -- (0, 5/6) -- (7/4, 2) -- (3, 2) -- (5, 0) -- cycle;

\draw (5, 0) -- (2, 3);
\draw (0, 5/6) -- (3, 17/6);
\node at (2, 3.5) {$x_1 + x_2 = 5$};
\node at (4.6, 2.7) {$4x_1 + 6x_2 = 5$};
\draw (0, 2) -- (4.5, 2);
\node at (5.2, 2) {$x_2 = 2$};
\draw (0, 3) -- (4.5, 3);
\node at (5.2, 3.2) {$x_2 = 3$};
\end{tikzpicture}
```

Figure 13: domain-13.tex: Feasible set with pattern



```

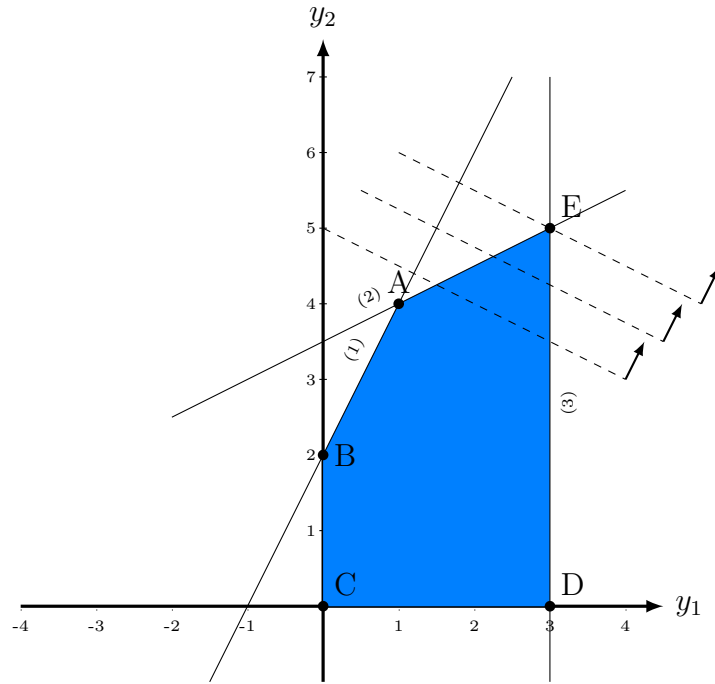
\begin{tikzpicture}[scale=0.8]
\draw[>-] (0, 0) -- (6, 0);
\draw[>-] (0, 0) -- (0, 4);
\node at (6.3, 0) {\textit{x}_1};
\node at (0, 4.3) {\textit{x}_2};

\foreach \x in {0, ..., 5} {
\draw (\x, 1pt) -- (\x, -3pt) node[anchor=north] {\x};
}
\foreach \y in {0, ..., 3} {
\draw (1pt, \y) -- (-3pt, \y) node[anchor=west] {\y};
}
\draw[
fill=gray,
opacity=0.3
] (0, 0) -- (0, 5/6) -- (2.5, 2.5) -- (5, 0) -- cycle;
\draw[
pattern=vertical lines
] (2, 0) -- (2, 2) -- (3, 2) -- (5, 0) -- cycle;

\draw (5, 0) -- (2, 3);
\draw (0, 5/6) -- (3, 17/6);
\node at (2, 3.5) {\textit{x}_1+\textit{x}_2=5};
\node at (4.7, 2.7) {\textit{-4x}_1+6\textit{x}_2=5};
\draw (0, 2) -- (4.5, 2);
\node at (5.2, 2) {\textit{x}_2=2};
\draw (2, 0) -- (2, 2.5);
\node at (1.3, 2.7) {\textit{x}_1=2};
\end{tikzpicture}

```

Figure 14: domain-14.tex: Feasible set with pattern



```

\begin{tikzpicture}
\draw[very thick, -latex] (0, 1) coordinate(x1) -- (8.5, 1) coordinate(x2) node[right] {$y_1$};
\draw[very thick, -latex] (4, 0) coordinate(y1) -- (4, 8.5) coordinate(y2) node[above] {$y_2$};
\foreach \x in {-4, ..., -1} {
\draw (\x+4, 0.95) -- (\x+4, 0.95) node[below] {\tiny\x};
}
\foreach \x in {1, ..., 4} {
\draw (\x+4, 0.95) -- (\x+4, 0.95) node[below] {\tiny\x};
}
\foreach \y in {1, ..., 7} {
\draw (3.95, \y+1) -- (4.05, \y+1) node[left] {\tiny\y};
}
\fill[blue!50!cyan, opacity=0.3] (4, 1) -- (4, 3) -- (5, 5) -- (7, 6) -- (7, 1) -- cycle;
\draw (2.5, 0) coordinate (a1) --
node[above right, sloped] {\tiny $(1)$} (6.5, 8) coordinate (a2);

\draw (2, 3.5) coordinate (b1) --
node[above left, sloped] {\tiny $(2)$} (8, 6.5) coordinate (b2);

\draw (7, 0) coordinate (c1) --
node[below left, sloped] {\tiny $(3)$} (7, 8) coordinate (c2);

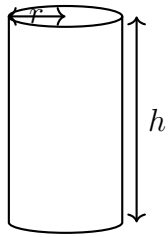
\coordinate (v1) at (intersection of a1--a2 and b1--b2);
\coordinate (v2) at (intersection of a1--a2 and y1--y2);
\coordinate (v3) at (intersection of x1--x2 and y1--y2);
\coordinate (v4) at (intersection of x1--x2 and c1--c2);
\coordinate (v5) at (intersection of b1--b2 and c1--c2);
\fill[black] (v1) node[above] {A} circle (2pt);
\fill[black] (v2) node[right] {B} circle (2pt);
\fill[black] (v3) node[above right] {C} circle (2pt);
\fill[black] (v4) node[above right] {D} circle (2pt);
\fill[black] (v5) node[above right] {E} circle (2pt);

\draw[dashed] (4, 6) coordinate (b1) -- (8, 4) coordinate (b2);
\draw[dashed] (4.5, 6.5) coordinate (b1) -- (8.5, 4.5) coordinate (b2);
\draw[dashed] (5, 7) coordinate (b1) -- (9, 5) coordinate (b2);

\draw[-latex, thick] (8, 4)--(8.25, 4.5);
\draw[-latex, thick] (8.5, 4.5)--(8.75, 5);
\draw[-latex, thick] (9, 5)--(9.25, 5.5);
\end{tikzpicture}

```

Figure 15: domain-15.tex: Polygon with level lines and vertices

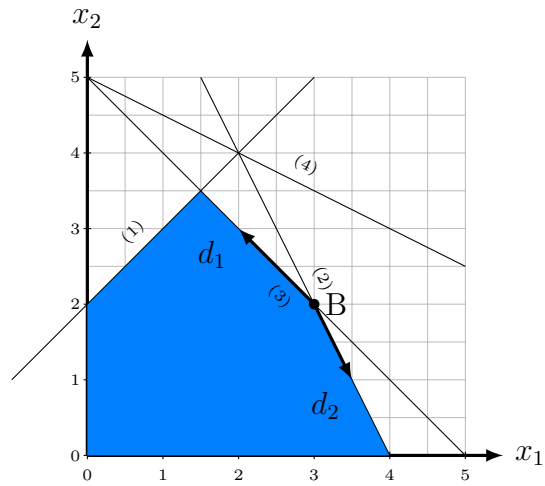


```
\begin{tikzpicture}[thick]
\node (a) [
  cylinder,
  shape border rotate=90,
  draw,
  minimum height=30mm,
  minimum width=15mm
] {};
\draw [<->] ([xshift=5pt] a.before bottom) --
  ([xshift=5pt] a.after top)
  node [midway, right] {$h$};
\coordinate (center) at ($(a.before top)!0.5!(a.after top)$);
\draw [<->] (a.before top) -- (center) node [midway] {$r$};
\end{tikzpicture}
```

---

Figure 16: domain-16.tex: Cylinder



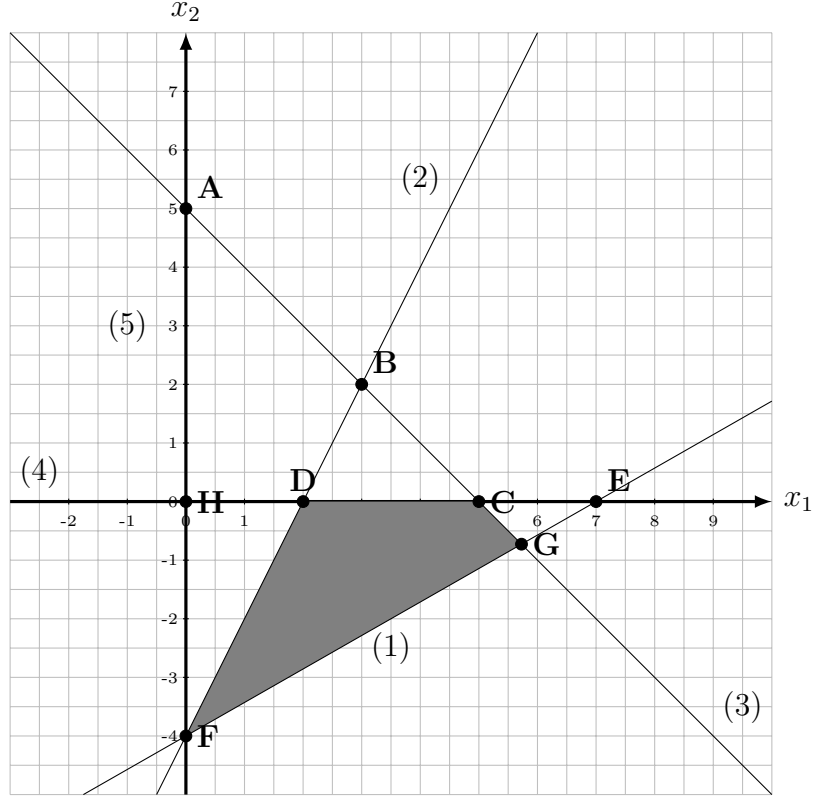


```

\begin{tikzpicture}
\draw[gray!50, thin, step=0.5] (0, 0) grid (5, 5);
\draw[very thick, -latex] (0, 0) coordinate(x1) -- (5.5, 0) coordinate(x2) node[right] {$x_1$};
\draw[very thick, -latex] (0, 0) coordinate(y1) -- (0, 5.5) coordinate(y2) node[above] {$x_2$};
\foreach \x in {0, ..., 5} {
\draw (\x, 0.05) -- (\x, -0.05) node[below] {\tiny\x};
}
\foreach \y in {0, ..., 5} {
\draw (-0.05, \y) -- (0.05, \y) node[left] {\tiny\y};
}
\fill[blue!50!cyan, opacity=0.3] (0, 0) -- (0, 2) -- (1.5, 3.5) -- (3, 2) -- (4, 0) -- cycle;
\draw (-1, 1) coordinate (a1) -- node[above left, sloped] {\tiny $(1)$} (3, 5) coordinate (a2);
\draw (1.5, 5) coordinate (b1) -- node[above right, sloped] {\tiny $(2)$} (4, 0) coordinate (b2);
\draw (0, 5) coordinate (c1) -- node[below right, sloped] {\tiny $(3)$} (5, 0) coordinate (c2);
\draw (5, 2.5) coordinate (d1) -- node[above right, sloped] {\tiny $(4)$} (0, 5) coordinate (d2);
\draw[very thick, -latex] (3, 2) -- (2, 3) node[below left] {$d_1$};
\draw[very thick, -latex] (3, 2) -- (3.5, 1) node[below left] {$d_2$};
\coordinate (v4) at (intersection of b1--b2 and c1--c2);
\fill[black] (v4) node[right] {B} circle (2pt);
\end{tikzpicture}

```

Figure 17: domain-17.tex: Grid and intersection



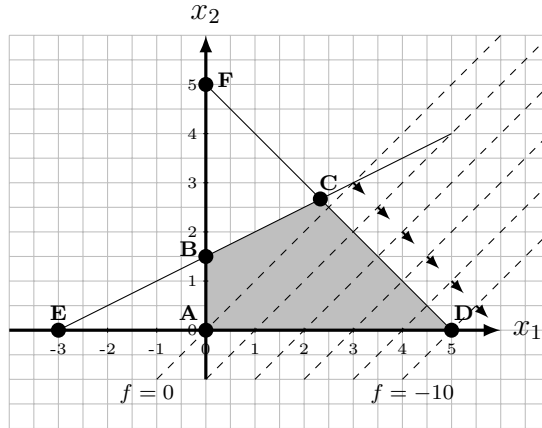
```

\begin{tikzpicture}[scale=0.775]
\draw[gray!50, thin, step=0.5] (-3, -5) grid (10, 8);
\draw[very thick, -latex] (-3, 0) coordinate(x1) -- (10, 0) coordinate(x2) node[right] {$x_1$};
\draw[very thick, -latex] (0, -5) coordinate(y1) -- (0, 8) coordinate(y2) node[above] {$x_2$};
\foreach \x in {-2, ..., 9} {
\draw (\x, 0.05) -- (\x, -0.05) node[below] {\tiny\x};
}
\foreach \y in {-4, ..., 7} {
\draw (-0.05, \y) -- (0.05, \y) node[left] {\tiny\y};
}
\fill[gray, opacity=0.4] (0, -4) -- (63/11, -8/11) -- (5, 0) -- (2, 0) -- cycle;
\draw (10, 12/7) -- (-7/4, -5);
\draw (-1/2, -5) -- (6, 8);
\draw (10, -5) -- (-3, 8);
\node at (4, 5.5){(2)};
\node at (3.5, -2.5){(1)};
\node at (9.5, -3.5){(3)};
\node at (-2.5, 0.5){(4)};
\node at (-1, 3){(5)};

\draw [draw=black, fill=black] (0, 5) circle (0.1) node[anchor=south west] {\textbf{A}};
\draw [draw=black, fill=black] (3, 2) circle (0.1) node[anchor=south west] {\textbf{B}};
\draw [draw=black, fill=black] (5, 0) circle (0.1) node[anchor=west] {\textbf{C}};
\draw [draw=black, fill=black] (2, 0) circle (0.1) node[anchor=south] {\textbf{D}};
\draw [draw=black, fill=black] (7, 0) circle (0.1) node[anchor=south west] {\textbf{E}};
\draw [draw=black, fill=black] (0, -4) circle (0.1) node[anchor=west] {\textbf{F}};
\draw [draw=black, fill=black] (63/11, -8/11) circle (0.1) node[anchor=west] {\textbf{G}};
\draw [draw=black, fill=black] (0, 0) circle (0.1) node[anchor=west] {\textbf{H}};
\end{tikzpicture}

```

Figure 18: domain-18.tex: Complex domain with vertices



```

\begin{tikzpicture}[scale=0.65]
\fill[gray!50] (0, 0) -- (0, 1.5) -- (7/3, 8/3) -- (5, 0) -- cycle;
\draw[gray!50, thin, step=0.5] (-4, -2) grid (7, 6);
\draw[very thick, -latex] (-4, 0) coordinate(x1) -- (6, 0) coordinate(x2) node[right] {$x_1$};
\draw[very thick, -latex] (0, -1) coordinate(y1) -- (0, 6) coordinate(y2) node[above] {$x_2$};
\foreach \x in {-3, ..., 5} {
\draw (\x, 0.05) -- (\x, -0.05) node[below] {\tiny\x};
}
\foreach \y in {0, ..., 5} {
\draw (-0.05, \y) -- (0.05, \y) node[left] {\tiny\y};
}
\draw (0, 5) coordinate (a1) -- node[above left, sloped] {} (5, 0) coordinate (a2);
\draw (-3, 0) coordinate (b1) -- node[above right, sloped] {} (5, 4) coordinate (b2);
\draw[dashed] (-1, -1) -- (6, 6);
\draw[dashed] (0, -1) -- (7, 6);
\draw[dashed] (1, -1) -- (7, 5);
\draw[dashed] (2, -1) -- (7, 4);
\draw[dashed] (3, -1) -- (7, 3);
\draw[dashed] (4, -1) -- (7, 2);
\node at (0, 0) [circle, fill, inner sep=2pt] {};
\node at (0, 1.5) [circle, fill, inner sep=2pt] {};
\node at (0, 5) [circle, fill, inner sep=2pt] {};
\node at (-3, 0) [circle, fill, inner sep=2pt] {};
\node at (2.33, 2.67) [circle, fill, inner sep=2pt] {};
\node at (5, 0) [circle, fill, inner sep=2pt] {};
\node at (-0.35, 0.35) {\scriptsize{\textbf{A}}};
\node at (-0.35, 1.65) {\scriptsize{\textbf{B}}};
\node at (2.5, 3) {\scriptsize{\textbf{C}}};
\node at (5.25, 0.35) {\scriptsize{\textbf{D}}};
\node at (-3, 0.35) {\scriptsize{\textbf{E}}};
\node at (0.4, 5.1) {\scriptsize{\textbf{F}}};
\node at (-1.2, -1.3) {\scriptsize{$f=0$}};
\node at (4.2, -1.3) {\scriptsize{$f=-10$}};
\draw[-latex, thick] (3, 3) -- (3.75, 2.75);
\draw[-latex, thick] (3.5, 2.5) -- (3.75, 2.25);
\draw[-latex, thick] (4.0, 2.0) -- (4.25, 1.75);
\draw[-latex, thick] (4.5, 1.5) -- (4.75, 1.25);
\draw[-latex, thick] (5.0, 1.0) -- (5.25, 0.75);
\draw[-latex, thick] (5.5, 0.5) -- (5.75, 0.25);
\end{tikzpicture}

```

Figure 19: domain-19.tex: Domain with level lines

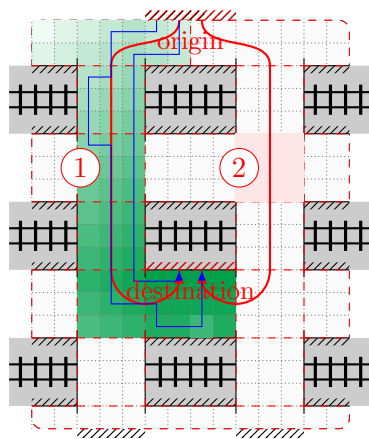


Figure 20: domain-20.tex: Complex map