Das jigsaw Paket

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Dante Herbsttagung

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JWST image of the Carina Nebula (Credit: NASA, ESA, CSA, STScI)
Music: https://www.backgrounds-music.com/free-background-music

Grundlagen

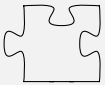
Puzzle Teil

```
\piece{<bottom>}{<right>}{<top>}{<left>}
```

0:	Kante
1:	Innen
-1:	Außen

Beispiel

```
\begin{tikzpicture}
  \piece{0}{1}{1}{-1}
\end{tikzpicture}
```



Farben

Füllfarbe

```
\begin{tikzpicture}
  \piece[magenta]{-1}{1}{-1}{1}
\end{tikzpicture}
```

Umrandung

```
\begin{tikzpicture}
  \color{magenta}\piece{-1}{-1}{1}{1}
\end{tikzpicture}
```

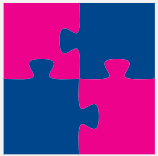
TikZ pic

```
\begin{tikzpicture}
  \path (2,-3) pic[
    fill=blue,draw=magenta,thick
  ]{piece={1}{-1}{1}{0}};
\end{tikzpicture}
```

Positionierung I – Manuell

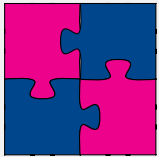
Manuell

```
\begin{tikzpicture}
\pic at (0,1)
  [fill=magenta]{piece={1}{1}{0}{0}};
\pic at (1,1)
  [fill=blue]{piece={1}{0}{0}{-1}};
\pic at (0,0)
  [fill=blue]{piece={0}{-1}{-1}{0}};
\pic at (1,0)
  [fill=magenta]{piece={0}{0}{-1}{1}};
\end{tikzpicture}
```



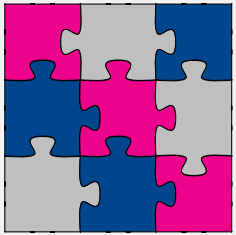
Positionierung II – TikZ matrix

```
\begin{tikzpicture}
\matrix [nodes=draw]{
\pic [fill=magenta]{piece
    ={-1}{-1}{0}{0}}; &
\pic [fill=blue]{piece={1}{0}{0}{-1}}; \\
\pic [fill=blue]{piece={0}{-1}{1}{0}}; &
\pic [fill=magenta]{piece={0}{0}{-1}{1}};
     \\
};
\end{tikzpicture}
```



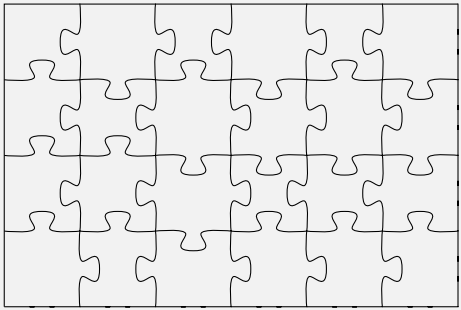
Positionierung III – \tile

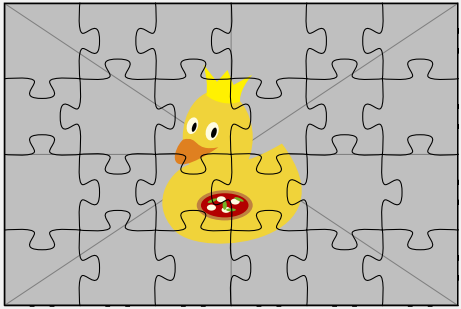
```
\tile[magenta]{1}{1}{0}{0}%
\tile[lightgray]{1}{-1}{0}{-1}%
\tile[blue]{1}{0}{0}{1}

\tile[blue]{1}{-1}{-1}{0}%
\tile[magenta]{1}{-1}{-1}{1}%
\tile[lightgray]{-1}{0}{-1}{1}

\tile[lightgray]{0}{-1}{-1}{0}%
\tile[blue]{0}{-1}{-1}{1}%
\tile[magenta]{0}{0}{1}{1}
```



Automatische Puzzeln I

```
\begin{tikzpicture}
\jigsaw{6}{4}
\end{tikzpicture}
```



Automatische Puzzeln II

```
\begin{tikzpicture}
\node at (3,2) {%
  \includegraphics[width=6cm,height=4cm]
    {example-image-duck}
};
\jigsaw{6}{4}
\end{tikzpicture}
```