

$$\text{In}[\bullet]:= \mathbf{g0} = 4\pi \frac{3}{2} \sin[\text{ArcTan}[1/\sqrt{2}]]$$

$$\text{In}[\bullet]:= \mathbf{g1} = 4\pi \sin[\pi/8]$$

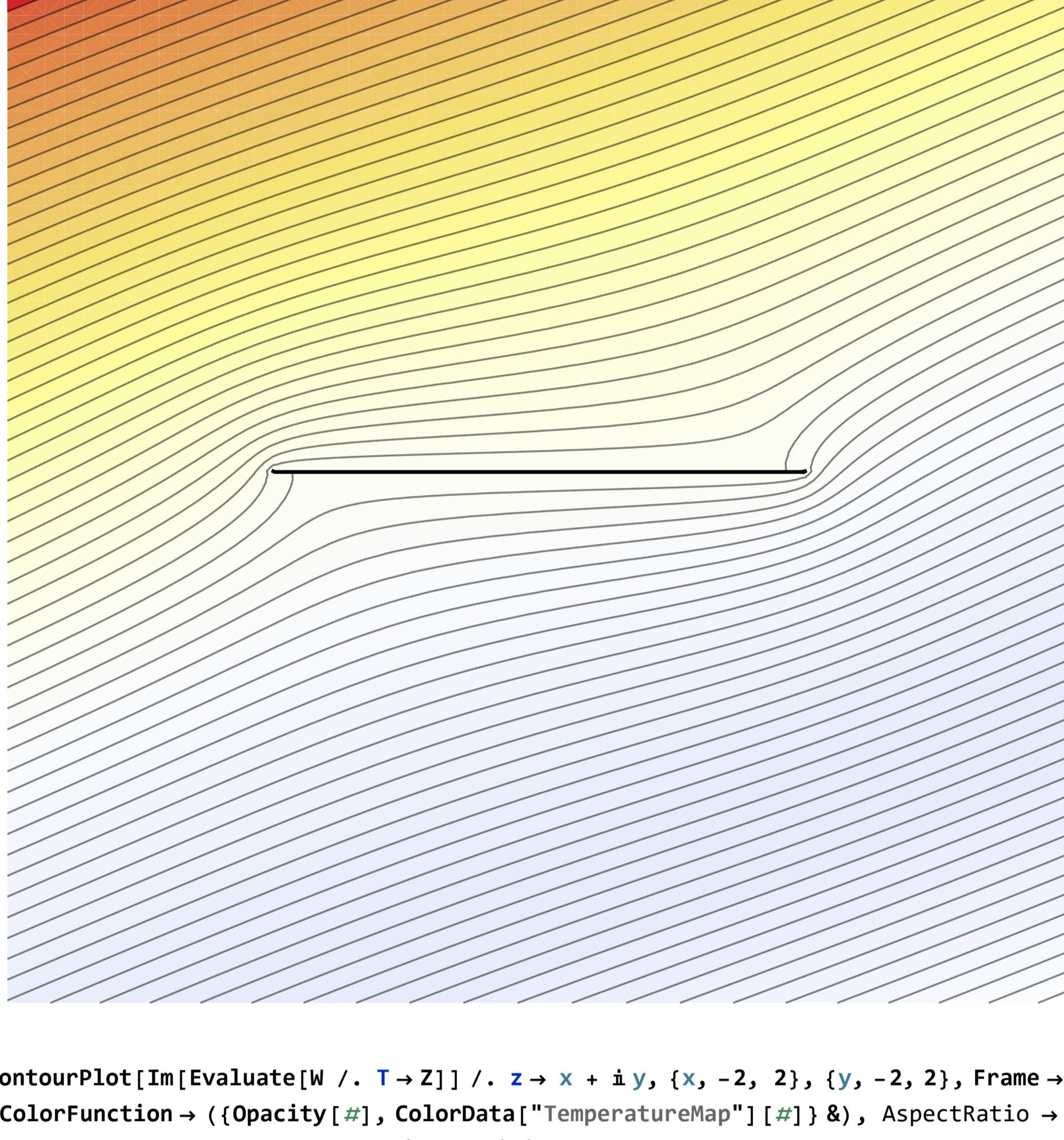
$$\text{In}[\bullet]:= \mathbf{z} = \mathbf{z} + \mathbf{z} \sqrt{1 - \mathbf{z}^{-2}}$$

$$\text{In}[\bullet]:= \mathbf{W} = \frac{1}{T} \text{Exp}[-i\pi/8] + \frac{1}{T} \text{Exp}[i\pi/8] - \frac{\mathbf{g1}}{2i\pi} \text{Log}[T]$$

$$\text{In}[\bullet]:= \mathbf{W0} = \frac{3/2}{T} - \frac{\mathbf{g0}}{2i\pi} \text{Log}[T/\sqrt{3/2}]$$

$\text{In}[\bullet]:= \text{ContourPlot}[\text{Im}[Z /. z \rightarrow x + iy] == 0, \{x, -1, 1\}, \{y, -1, 1\}, \text{Frame} \rightarrow \text{None}, \text{AspectRatio} \rightarrow 1, \text{ContourStyle} \rightarrow \{\text{Black}, \text{Thick}\}, \text{PlotPoints} \rightarrow 50]$

$\text{In}[\bullet]:= \text{ContourPlot}[\text{Im}[\text{Evaluate}[W1 /. T \rightarrow Z]] /. z \rightarrow x + iy, \{x, -2, 2\}, \{y, -2, 2\}, \text{Frame} \rightarrow \text{None}, \text{ColorFunction} \rightarrow (\{\text{Opacity}[\#], \text{ColorData}[\text{"TemperatureMap"}][\#]\} \&), \text{AspectRatio} \rightarrow 1, \text{Contours} \rightarrow 70, \text{Mesh} \rightarrow \text{None}, \text{WorkingPrecision} \rightarrow 100]$



$\text{In}[\bullet]:= \text{ContourPlot}[\text{Im}[\text{Evaluate}[W /. T \rightarrow Z]] /. z \rightarrow x + iy, \{x, -2, 2\}, \{y, -2, 2\}, \text{Frame} \rightarrow \text{None}, \text{ColorFunction} \rightarrow (\{\text{Opacity}[\#], \text{ColorData}[\text{"TemperatureMap"}][\#]\} \&), \text{AspectRatio} \rightarrow 1, \text{Contours} \rightarrow 70, \text{Mesh} \rightarrow \text{None}, \text{WorkingPrecision} \rightarrow 100]$

