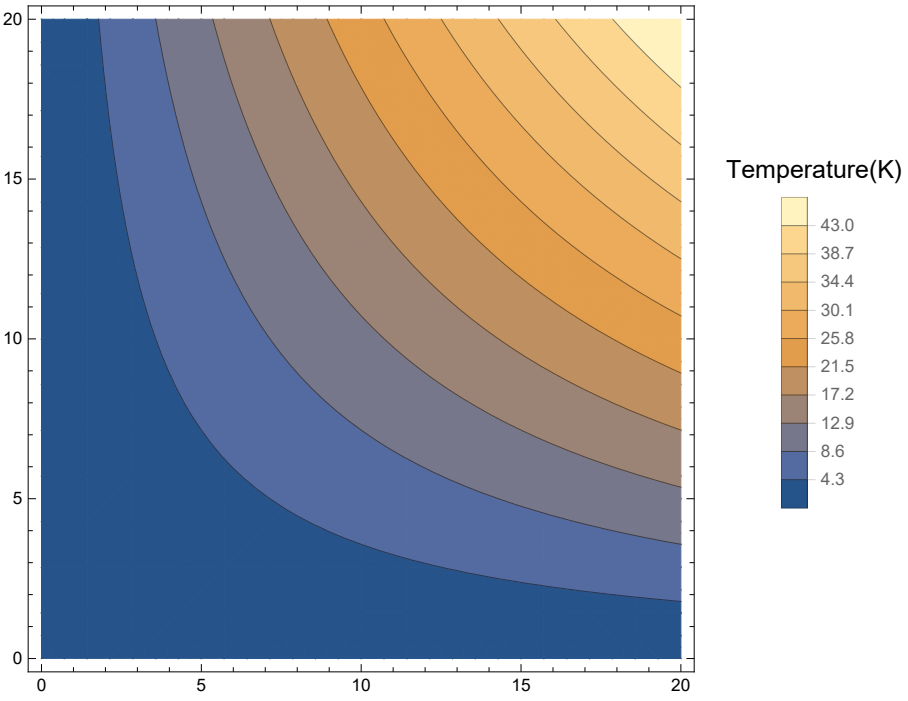
- $(p - a/v^2)(v - b) = RT$ - Van der waals gas

In[14]:=
```
R = 8.31;
T[p_, v_, a_, b_] := (p - a / v^2) (v - b) / R
```

- Ideal gas

In[39]:=
```
ContourPlot[T[p, v, 0, 0], {p, 0, 20}, {v, 0, 20}, Contours → 10,
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

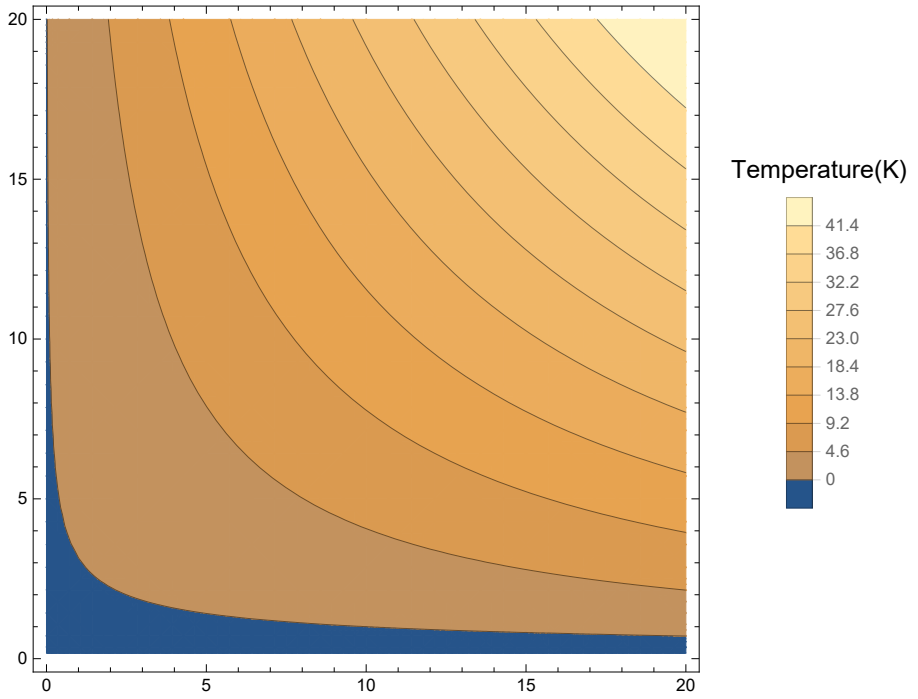
Out[39]=




- high molecular interaction & low repulsive force

In[38]:=
```
ContourPlot[T[p, v, 10, 0], {p, 0, 20}, {v, 0, 20}, Contours → 10,
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

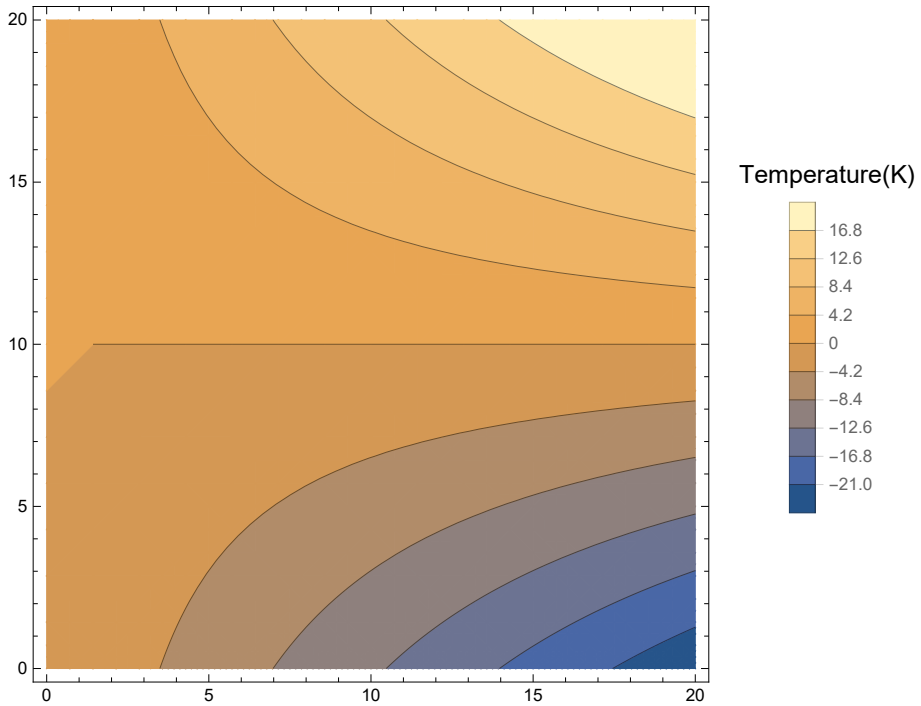
Out[38]=




- low interaction & high repulsive force

In[40]:=
```
ContourPlot[T[p, v, 0, 10], {p, 0, 20}, {v, 0, 20}, Contours → 10,
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

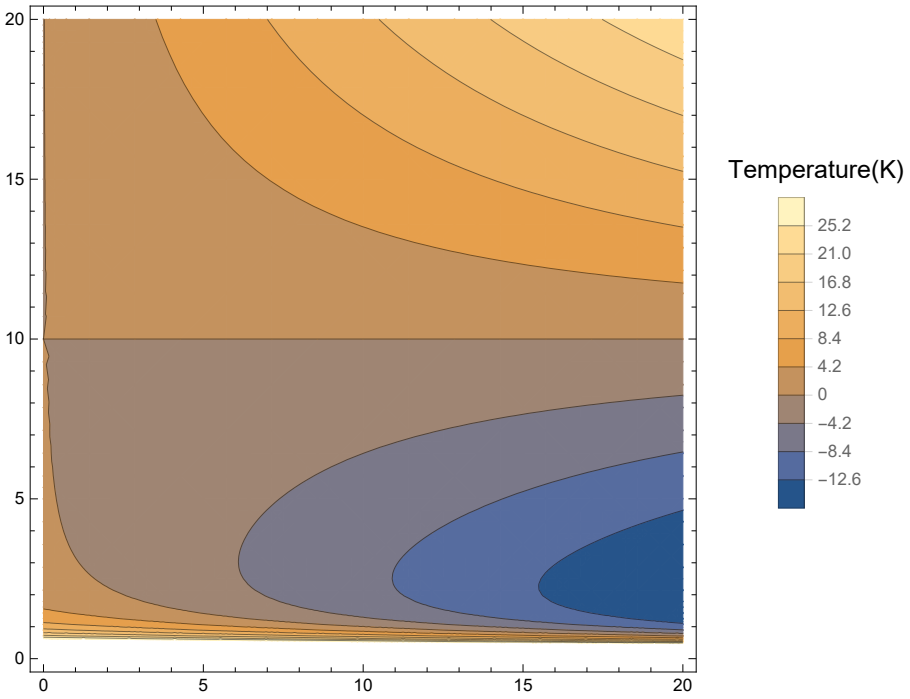
Out[40]=




- High interaction & high repulsive force

In[41]:=
```
ContourPlot[T[p, v, 10, 10], {p, 0, 20}, {v, 0, 20}, Contours → 10,
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

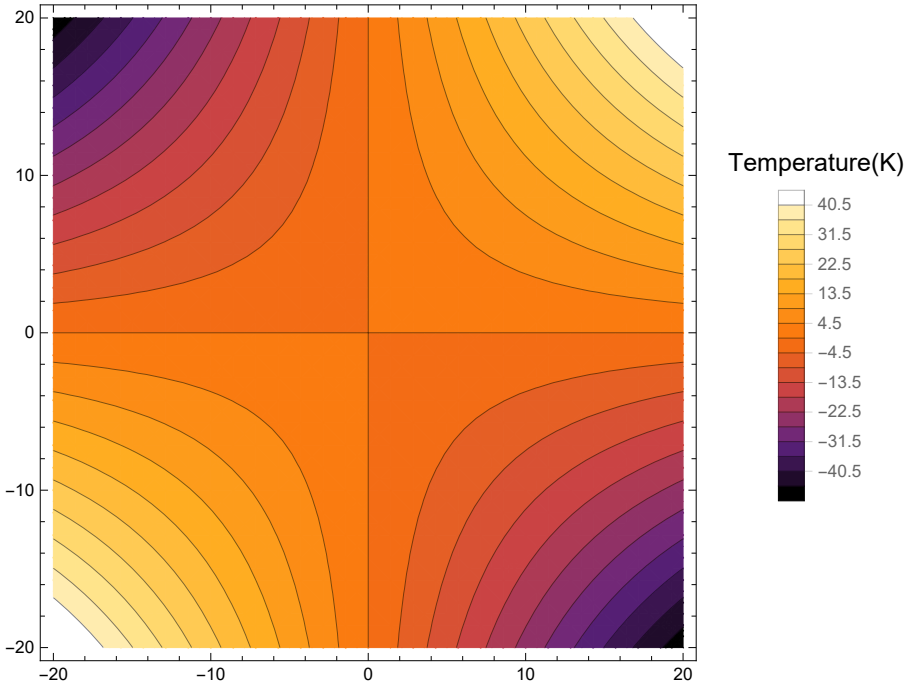
Out[41]=




- ETC..

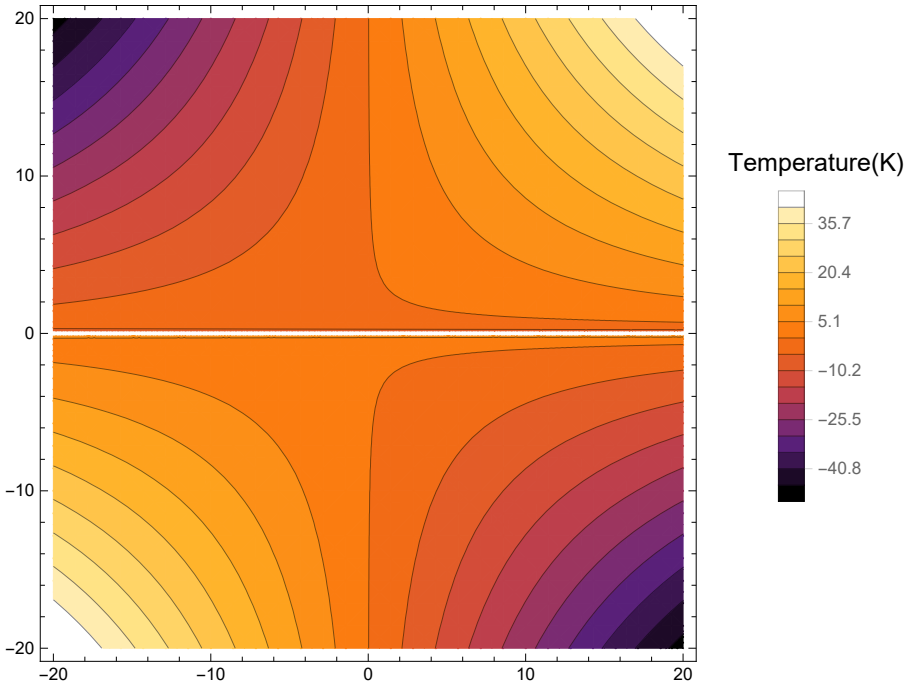
In[49]:=
```
ContourPlot[T[p, v, 0, 0], {p, -20, 20}, {v, -20, 20},
 Contours → 20, ColorFunction → ColorData["SunsetColors"],
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

Out[49]=



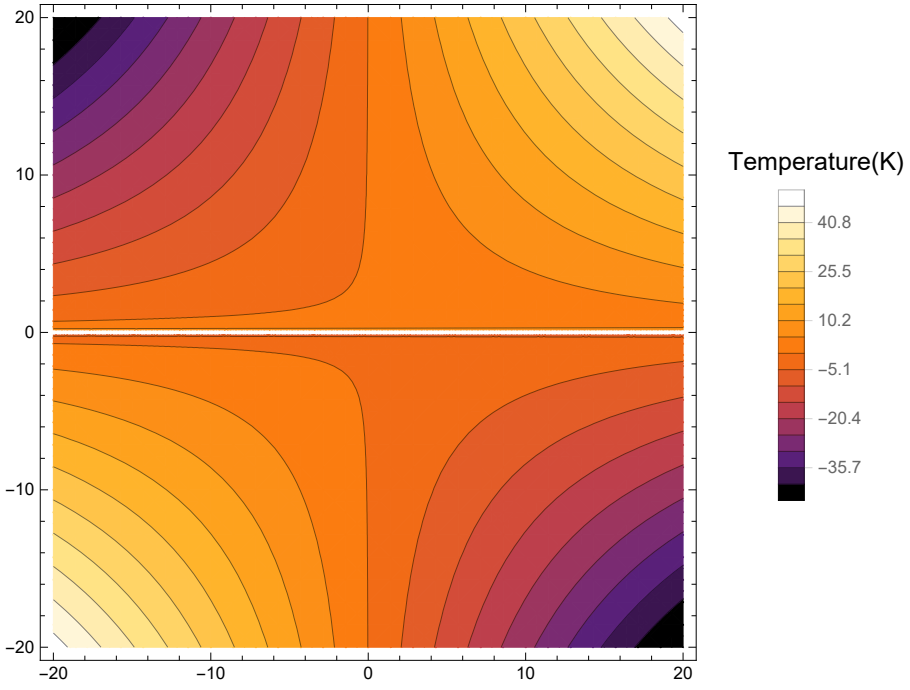
In[50]:=
```
ContourPlot[T[p, v, 10, 0], {p, -20, 20}, {v, -20, 20},
 Contours → 20, ColorFunction → ColorData["SunsetColors"],
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

Out[50]=



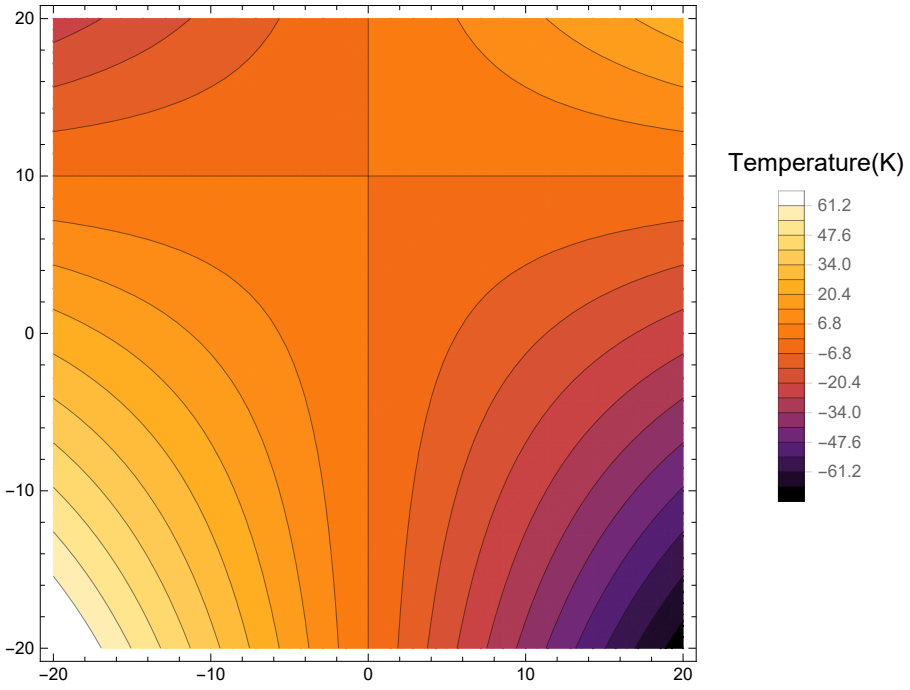

In[51]:=
```
ContourPlot[T[p, v, -10, 0], {p, -20, 20}, {v, -20, 20},
 Contours → 20, ColorFunction → ColorData["SunsetColors"],
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

Out[51]=



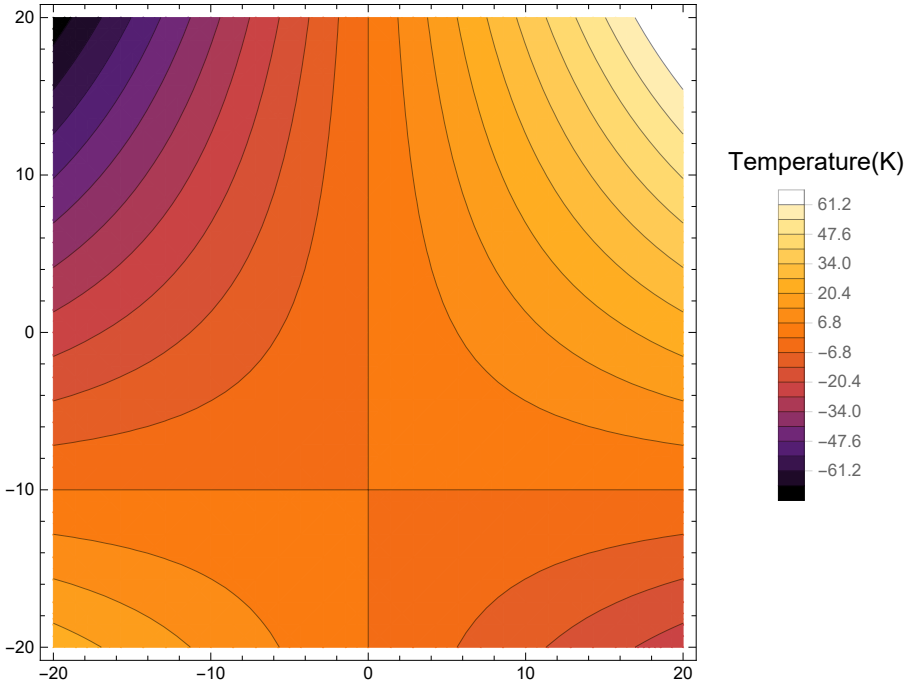
In[52]:=
```
ContourPlot[T[p, v, 0, 10], {p, -20, 20}, {v, -20, 20},
 Contours → 20, ColorFunction → ColorData["SunsetColors"],
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

Out[52]=



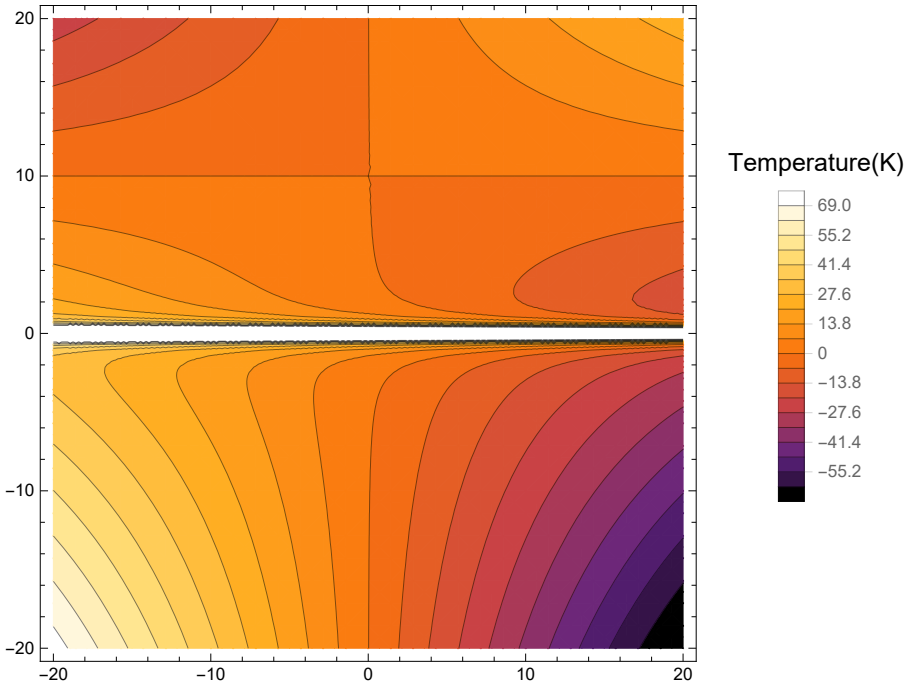

In[53]:=
```
ContourPlot[T[p, v, 0, -10], {p, -20, 20}, {v, -20, 20},
 Contours → 20, ColorFunction → ColorData["SunsetColors"],
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

Out[53]=



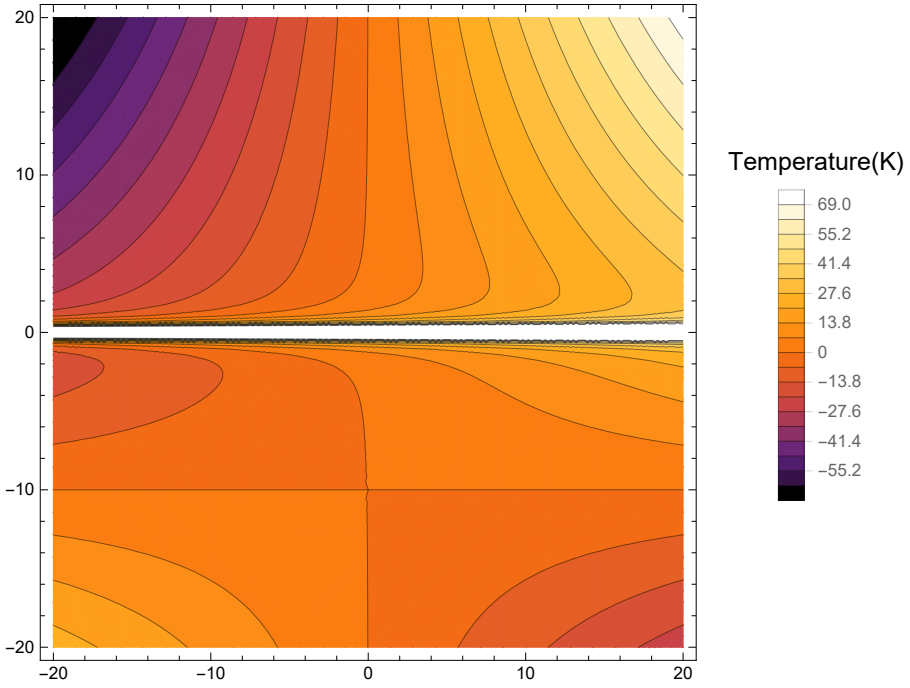
In[55]:=
```
ContourPlot[T[p, v, 10, 10], {p, -20, 20}, {v, -20, 20},
 Contours → 20, ColorFunction → ColorData["SunsetColors"],
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

Out[55]=




In[54]:=
```
ContourPlot[T[p, v, -10, -10], {p, -20, 20}, {v, -20, 20},
 Contours → 20, ColorFunction → ColorData["SunsetColors"],
 PlotLegends → BarLegend[Automatic, LegendMarkerSize → 180,
   LegendFunction → "Frame", LegendMargins → 5, LegendLabel → "Temperature(K)"]]
```

Out[54]=




In[56]:=
```
$image := ArrayPlot[RandomReal[1, {10, 20}], ColorFunction → "Rainbow"];
```

In[57]:=
```
CloudDeploy[GalleryView[Table[$image, 12]]]
```

Out[57]=
```
CloudObject[
 https://www.wolframcloud.com/objects/e0dac8b6-d09f-46dd-a6d0-ce2e22231869]
```