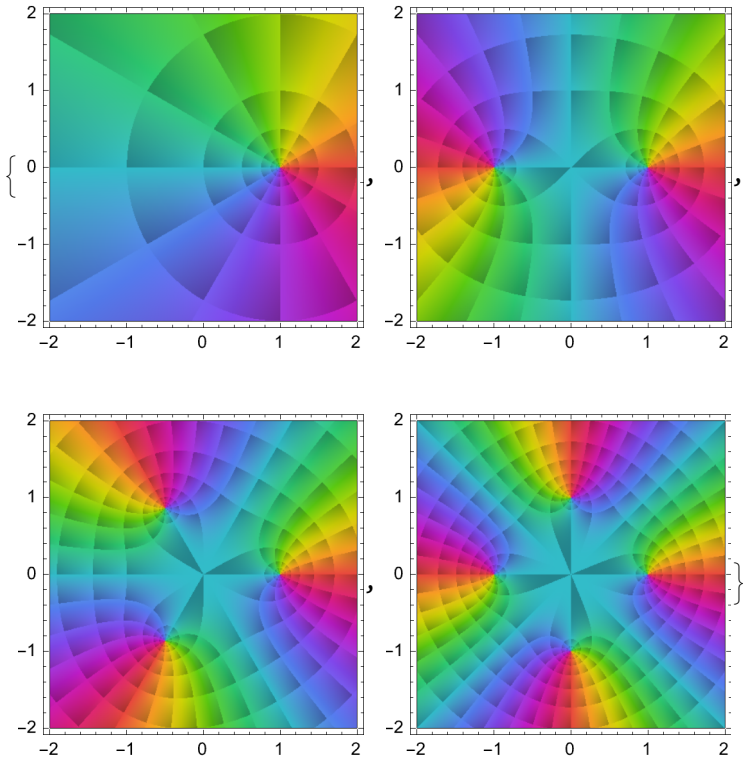


# 复数

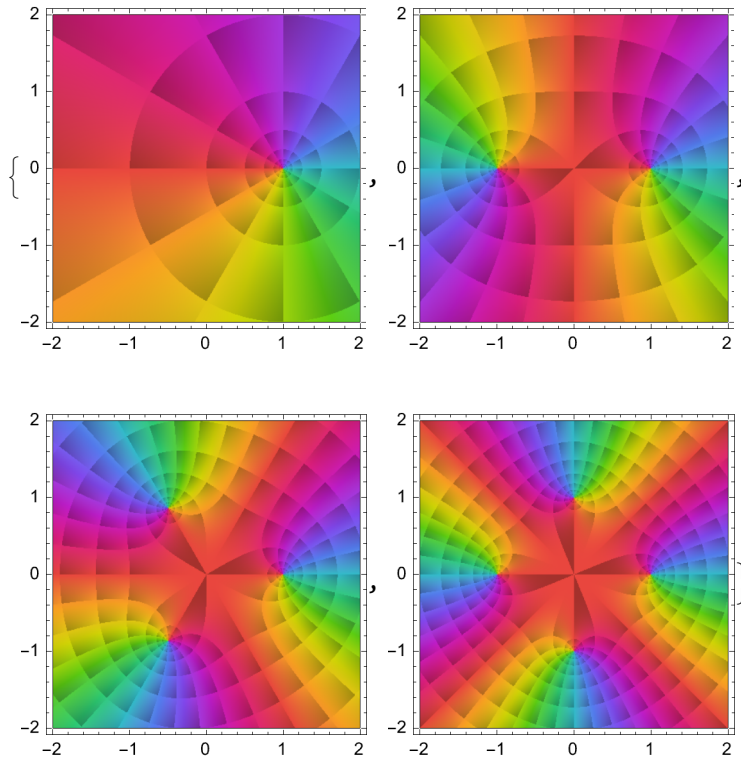
```
In[*]:= Table[ComplexPlot[z^n - 1, {z, -2 - 2 I, 2 + 2 I},
|表格 |辐角图 |虚数单位 |虚数单位
ColorFunction -> "CyclicLogAbsArg"], {n, 1, 4}]
|颜色函数
```

Out[\*]=



```
In[*]:= Table[ComplexPlot[1 - z^n, {z, -2 - 2 I, 2 + 2 I},
  表格 辐角图 虚数单位 虚数单位
  ColorFunction -> "CyclicLogAbsArg"], {n, 1, 4}]
  颜色函数
```

Out[\*]=



```
In[*]:= Product[Cos[θ] + I Sin[θ] - z, {θ, {θ, 2 π / 3, 4 π / 3}}]
  乘积 余弦 正弦
```

Out[\*]=

$$(1 - z) \left( -\frac{1}{2} - \frac{i\sqrt{3}}{2} - z \right) \left( -\frac{1}{2} + \frac{i\sqrt{3}}{2} - z \right)$$

```
In[*]:= Simplify[(1 - z) \left( -\frac{1}{2} - \frac{i\sqrt{3}}{2} - z \right) \left( -\frac{1}{2} + \frac{i\sqrt{3}}{2} - z \right)]
  化简
```

Out[\*]=

$$1 - z^3$$

```
In[*]:= Solve[(1 - z) \left( -\frac{1}{2} - \frac{i\sqrt{3}}{2} - z \right) \left( -\frac{1}{2} + \frac{i\sqrt{3}}{2} - z \right) == 0, z, Complexes]
  解方程 复数域
```

Out[\*]=

$$\left\{ \{z \rightarrow 1\}, \left\{ z \rightarrow -\frac{1}{2} - \frac{i\sqrt{3}}{2} \right\}, \left\{ z \rightarrow -\frac{1}{2} + \frac{i\sqrt{3}}{2} \right\} \right\}$$