In[1]:=
```
k1 = f[t, y[t]]
k2 = f[t + 2 / 5 * h, y[t] + 2 / 5 * h * k1]
k3 = f[t + 4 / 5 * h, y[t] - 1 / 5 * h * k1 + h * k2]
method = y[t + h] == y[t] + h * (1 / 6 * k1 + 5 / 12 * k2 + 5 / 12 * k3)
```

Out[1]= $f[t, y[t]]$

Out[2]= $f\left[\frac{2 h}{5} + t, \frac{2}{5} h f[t, y[t]] + y[t]\right]$

Out[3]= $f\left[\frac{4 h}{5} + t, -\frac{1}{5} h f[t, y[t]] + h f\left[\frac{2 h}{5} + t, \frac{2}{5} h f[t, y[t]] + y[t]\right] + y[t]\right]$

Out[4]= $y[h + t] == h\left(\frac{1}{6} f[t, y[t]] + \frac{5}{12} f\left[\frac{2 h}{5} + t, \frac{2}{5} h f[t, y[t]] + y[t]\right] + \frac{5}{12} f\left[\frac{4 h}{5} + t, -\frac{1}{5} h f[t, y[t]] + h f\left[\frac{2 h}{5} + t, \frac{2}{5} h f[t, y[t]] + y[t]\right] + y[t]\right]\right) + y[t]$

In[7]:=
```
f = Function[{t, y}, lambda * y]
```

Out[7]= $\text{Function}[\{t, y\}, \text{lambda } y]$

In[8]:=
```
method
```

Out[8]= $y[h + t] == y[t] + h\left(\frac{1}{6} \text{lambda } y[t] + \frac{5}{12} \text{lambda}\left(y[t] + \frac{2}{5} h \text{ lambda } y[t]\right) + \frac{5}{12} \text{lambda}\left(y[t] - \frac{1}{5} h \text{ lambda } y[t] + h \text{ lambda}\left(y[t] + \frac{2}{5} h \text{ lambda } y[t]\right)\right)\right)$

In[11]:=
```
Simplify[method /. {h → 1, lambda → z}]
```

Out[11]= $(6 + 6 z + 3 z^2 + z^3) y[t] == 6 y[1 + t]$

In[12]:=
```
r = (6 + 6 * z + 3 * z ^ 2 + z ^ 3) / 6
```

Out[12]= $\frac{1}{6}(6 + 6 z + 3 z^2 + z^3)$

In[13]:=
```
ra = Abs[r]
```

Out[13]= $\frac{1}{6} \text{Abs}[6 + 6 z + 3 z^2 + z^3]$

In[14]:=
```
ra2 = ra /. z → a + I * b
```

Out[14]= $\frac{1}{6} \text{Abs}[6 + 6 (a + i b) + 3 (a + i b)^2 + (a + i b)^3]$

In[16]:=
```
ContourPlot[ra2, {a, -4, 2}, {b, -3, 3},
 Contours → {1}, ContourShading → {Red, Blue}]
```

Out[16]=