In[1]:=
```
TrapezoidalR[a0_, b0_, n_, f_] :=
Module[{a = a0, b = b0, h, ApproxIntegral}, h = (b - a) / n;
ApproxIntegral = ((h * (f[a] + f[b])) / 2) + h * Sum[(f[a + k * h]), {k, n - 1}];
Return[ApproxIntegral];];
```

In[2]:=
```
f[x_] := 1 / (1 + x);
N[TrapezoidalR[0, 1, 2, f]]
```

Out[3]= 0.708333

In[4]:=
```
N[TrapezoidalR[0, 1, 4, f]]
```

Out[4]= 0.697024

In[5]:=
```
N[TrapezoidalR[0, 1, 8, f]]
```

Out[5]= 0.694122

In[6]:=
```
N[TrapezoidalR[0, 1, 16, f]]
```

Out[6]= 0.693391

In[10]:=
```
ActualValue = Integrate[1 / (1 + x), {x, 0, 1}];
```

In[11]:=
```
N[ActualValue]
```

Out[11]= 0.693147