Programm zur Modellierung des Besenkippens

In[29]:=
```
Tau[l_] := Sqrt[(2 * l) / (3 * 9.81)]
```
Quadratwurzel

In[30]:=
```
Bes[l_, p_] := Sin[p] / Tau[l]
```
Sinus

In[31]:=
```
Ges[dt_, l_, p_, n_, v0_] := v0 + Sum[m * dt * Bes[l, p], {m, 0, n}]
```
summiere

In[32]:=
```
Ort[l_, p_, dt_, r0_, v0_, i_] := r0 + Sum[n * dt * Ges[dt, l, p, v0, n], {n, 0, i}]
```
summiere

```
Solve[Evaluate[Ort[1.425, 0, 0.15, 0, 0, i]] == 90, i]
```
löse werte aus

Out[33]=
```
{{i → -6.58563 - 10.5288 i}, {i → -6.58563 + 10.5288 i}, {i → 11.6713}}
```

In[34]:=
```
11.6713 * 0.15
```

Out[34]=
```
1.7507
```

In[35]:=
```
Ort[l_, p_, dt_, r0_, v0_, i_] := r0 + Sum[n * dt * Ges[dt, l, p, v0, n], {n, 0, i}]
```
summiere

In[36]:=
```
For[i = 0, Evaluate[Ort[1.425, 0, 0.15, 0, 0, i]] < 90,
 i++, Print[Evaluate[Ort[1.425, 0, 0.15, 0, 0, i]]]]
```
For-Schleife werte aus

gib aus werte aus

```
0.
0.15
0.75
2.1
4.5
8.25
13.65
21.
30.6
42.75
57.75
75.9
```

In[37]:=
```
For[i = 0, Evaluate[Ort[1.425, 0, 0.15, 0, 0, i]] < 90, i++, Print[1.7507 - i * 0.15]]
```
For-Schleife werte aus gib aus

1.7507

1.6007

1.4507

1.3007

1.1507

1.0007

0.8507

0.7007

0.5507

0.4007

0.2507

0.1007