In[1]:=
```
R := 8.31
T := 293
M := 28.97 / 1000
g := 9.8
h := -10
```

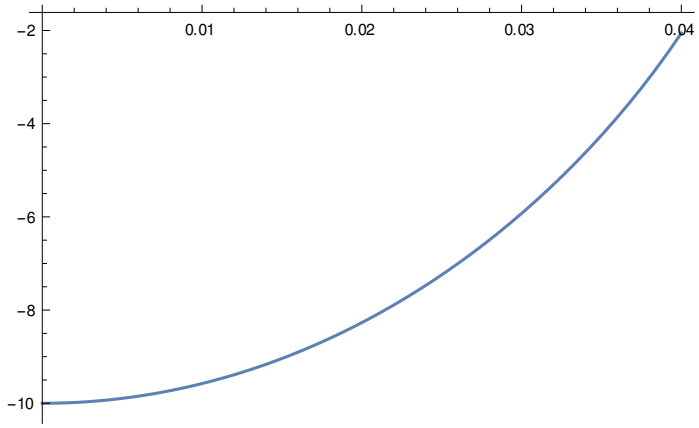
In[6]:=
```
solution = NDSolve [{y ''[t] == -g - (R * T) / (M * y[t]), y[0] == h, y '[0] == 0}, y, {t, 0, 10}]
```

NDSolve : At t == 0.04325234866474409` , step size is effectively zero ; singularity or stiff system suspected .

Out[6]=
```
{{y → InterpolatingFunction [ Domain : {{0., 0.0433 }}
                              Output : scalar ]}}
```

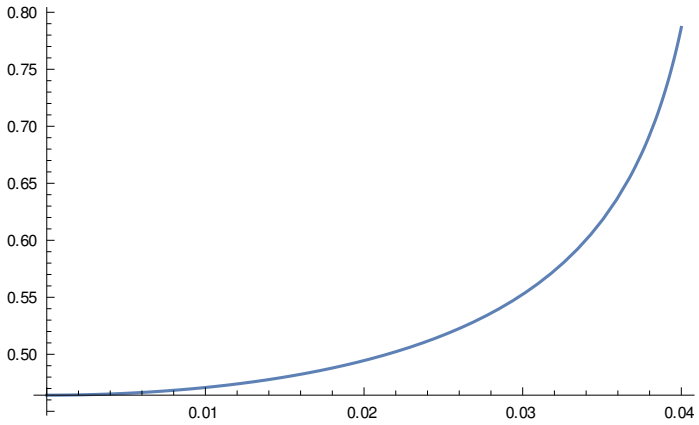
In[7]:=
```
Plot [Evaluate [y[t] /. solution ], {t, 0, 0.04}]
```

Out[7]=



In[8]:=
```
Plot [Evaluate [CubeRoot [-1 / (y[t] /. solution )]], {t, 0, 0.04}]
```

Out[8]=



In[9]:=
```
Manipulate [Graphics [{Circle [{0, (y[t] /. solution )[[1]]}, CubeRoot [-1 / (y[t] /.  solution )][[1]]]},
  PlotRange  -> {{-1, 1}, {-11, 0}}], {t, 0, 0.04}]
```

Out[9]=