ASSIGNMENT 1: STOKE'S LAW USING PYTHON

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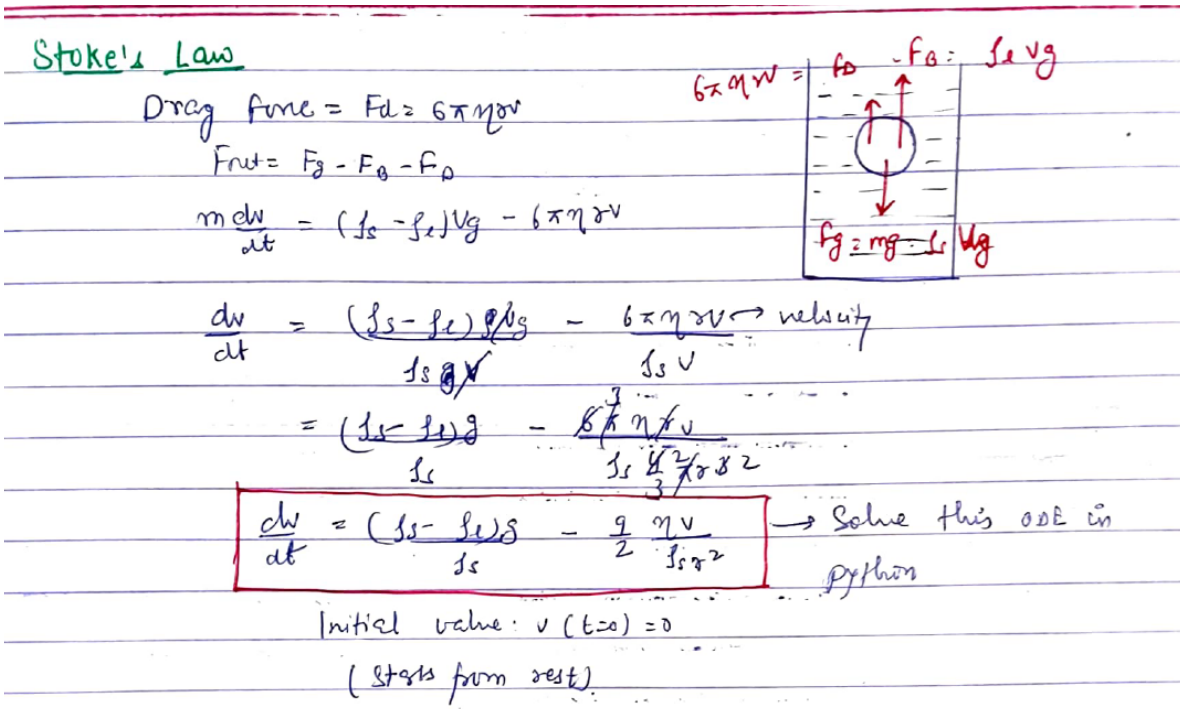


```
error=0; tol = 10**(-10)
g=9.81
del_t = 0.01
v_p = 0
vis, r, den_s, den_l = [float(x) for x in input().split()]
error=100
while(error > tol):
  a = ((den_s-den_l)*(9.81))/den_s - (4.5*vis*v_p)/(den_s*r*r)
  v_n = v_p + a*del_t
  error = (v_n - v_p)/v_n
  v_p = v_n
print("Terminal velocity from iterations: ",v_n)
print("Terminal Velocity as calculated from formula:", (2*r*r*g*(den_s-den_l))/(9*vis))
```

```
2.18 0.05 8050 1000
Terminal velocity from iterations:  17.624999640729037
Terminal Velocity as calculated from formula: 17.625000000000004
```