

**PROBLEM:**

When sunlight passes through the water surface of lakes and oceans, light is absorbed and diminishes its intensity with the depth it reaches. A biologist uses a photometer to measure the light intensity in a lake and this is the data obtained:

Depth (in feet)	Light intensity (lm)
5	13.0
10	7.6
15	4.5
20	2.7
25	1.8
30	1.1
35	0.5
40	0.3

Following this model, calculate the light intensity at 50 feet.