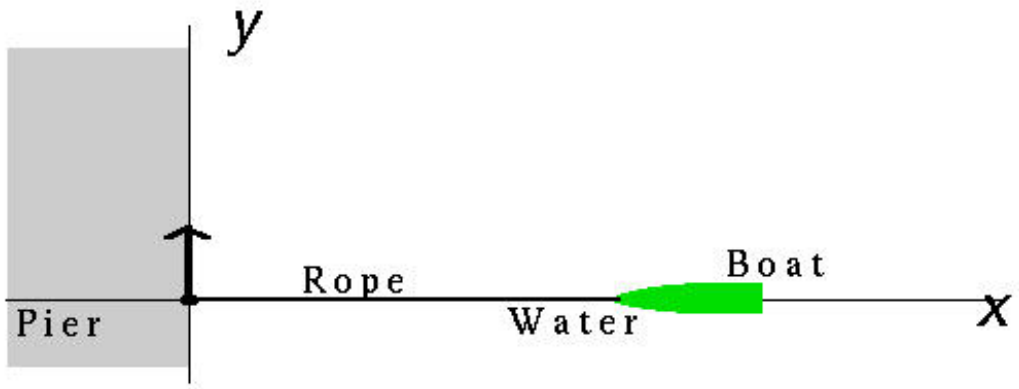
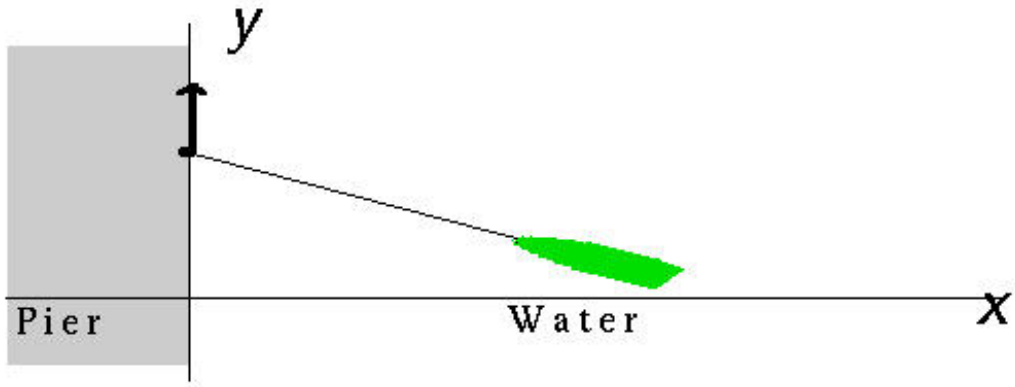
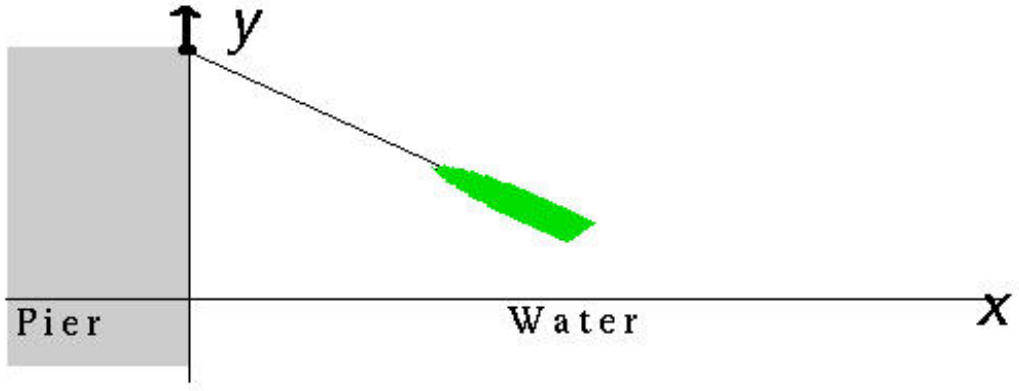
A rope, 10 meters long, is attached to a boat.



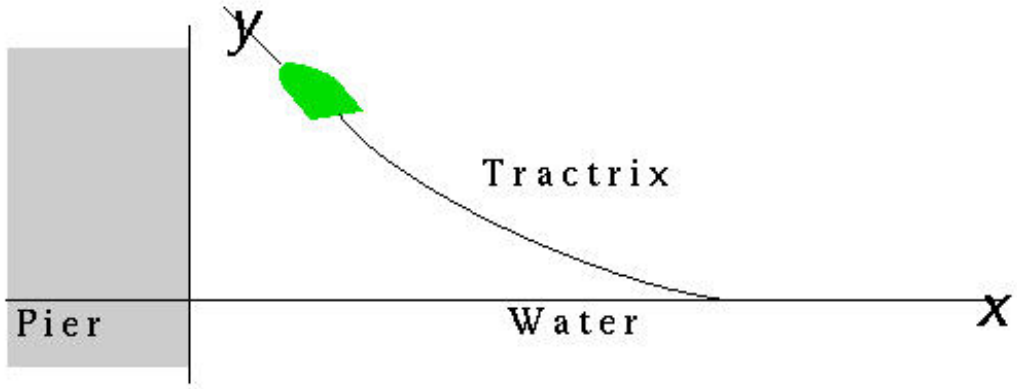
A man, holding this rope, walks along a pier. This pulls the boat on a curved path.

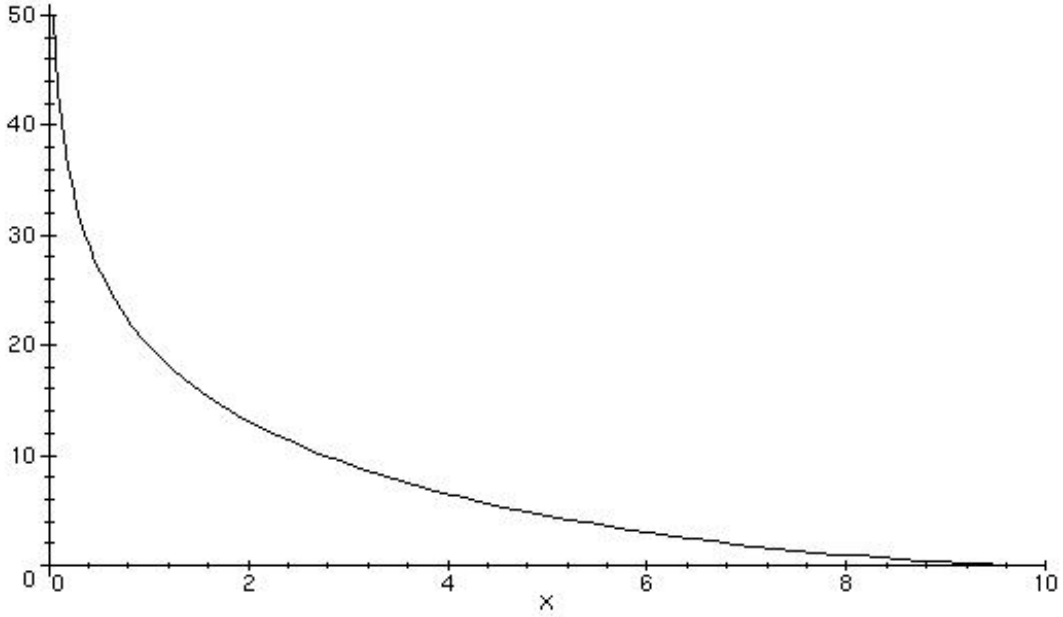


Let us draw a y axis along the pier and an x axis perpendicular to that. We will assume that the man has started at $(0, 0)$ and the boat has started at $(10, 0)$



The curved path that the boat travels along is called a *tractrix*




50
40
30
20
10
0
0
2
4
6
8
10
X