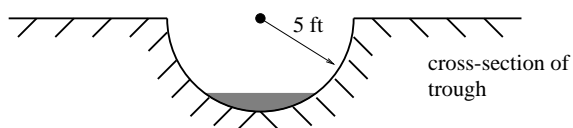
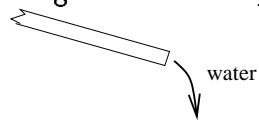


Math 120A
January 30, 1998
Worksheet #3

You will discuss this at the start of TA section Tuesday.

A trough has a semicircular cross section with a radius of 5 feet. Water starts flowing into the trough in such a way that the depth of the water is increasing at a rate of 2 inches per hour.



1. Give a function $w = f(t)$ relating the width w of the surface of the water to the time t , in hours. Make sure to specify the domain and compute the range too.
 2. After how many hours will the surface of the water have width of 6 feet?
 3. Give a function $t = f^{-1}(w)$ relating the time to the width of the surface of the water. Make sure to specify the domain and compute the range too.
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