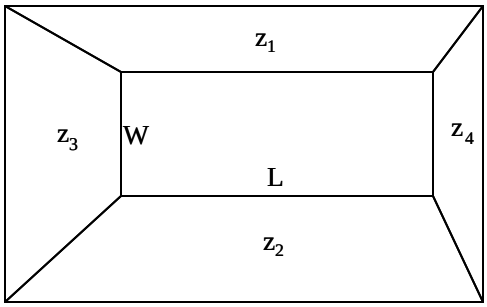
Asymmetric Basin

CE 201 Spring 2007

The asymmetric basin has side slopes that differ, as shown in the plan view below:



For such a basin, the storage volume as a function of depth *h* is given by:

$$S = LW\,h \;+\; 0.5(L)z_1\,h^2 + 0.5(L)z_2\,h^2 + 0.5(W)z_3\,h^2 + 0.5(W)z_4\,h^2$$
$$+\frac{1}{3}z_1z_3\,h^3 + \frac{1}{3}z_2z_3\,h^3 + \frac{1}{3}z_1z_4\,h^3 + \frac{1}{3}z_2z_4\,h^3$$

The A(*h*) function can be determined by differentiating this equation, the same way as we did in class for the symmetric case.