

We need to find an expression for the width w, when the depth is h.

 40 120 40

 40

***By similar triangles h***

 ***x***

***40 – h = 40 = 1***

 ***x 40***

 ***40 – h***

***So x = 40 – h***

***So the width at depth h***

***= x + x + 120 = 2x + 120 = 80 – 2h + 120 = 200 – 2h***

F =

 ***40***

***= 100y2 – 2 y3 = 117,333.3 tonnes***

 ***3***

 ***0***