

Substitute $w + 8$ for l in the second equation: $2(w + 8) + 2w = 52$

Simplify: $2w + 16 + 2w = 52$ or $4w + 16 = 52$

Solve for w : $4w = 36$, so $w = 9$

Substitute this value into the first equation: $l = 9 + 8 = 17$