

## The paradox that four equals five

In a broadcast, I once quoted, as an obvious truth, “two and two are four”. Shortly afterwards I had an indignant letter from a gentleman who asserted that 4 was equal to 5 – and sent me a ‘proof’ of this !

Here it is, starting with

$$16 - 36 = 25 - 45$$

Adding  $8\frac{1}{4}$  to each side

$$16 - 36 + 8\frac{1}{4} = 25 - 45 + 8\frac{1}{4}$$

$$\text{ie } (4 - 9/2)^2 = (5 - 9/2)^2$$

$$\text{so } 4 = 5$$

Can you find the slip in it ?