

# Math Diversion Problem 850

P. Reany

October 18, 2025

We must use time as a tool, not as a couch.

— John F. Kennedy

Source: The Ether of Great Mathematical Ideas

Title: How Many Correct

Presenter: Patrick

## 1 Word Problem

Ralph scored 61 points on a 10-question test that scores +10 points for every correct answer and -3 points for every incorrect answer. How many questions did Ralph get correct?

## 2 Solution

Let's use a figure for this one.

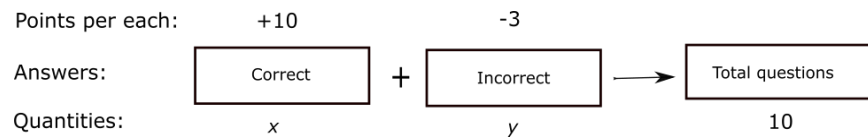


Figure 1. Test scores added: The positive and the negative.

---

Obviously,

$$x + y = 10. \tag{1}$$

And, the total points are given as the sum of rate times quantity for both correct and incorrect answers:

$$(+10)x + (-3)y = 61. \tag{2}$$

The solution to (1) and (2) is  $x = 7$  and  $y = 3$ . Ralph got seven questions correct.