



**Problem of the Week**  
**Problem D**  
**Not As It Seems**

In the following table, the letters  $a$ ,  $b$ ,  $c$ ,  $d$ , and  $e$  represent unknown numbers.

	Column 1	Column 2	Column 3
Row 1	75	$b$	83
Row 2	76	80	$d$
Row 3	$a$	81	85
Row 4	78	$c$	$e$

At a first glance, the numbers in the table may appear to follow a very predictable pattern. However, we need the columns and rows to follow the following rules:

1. The sum of the numbers in each of the four rows is the same.
2. The sum of the numbers in each of the three columns is the same.
3. The sum of any row does not equal the sum of any column.

Determine the values of  $a$ ,  $b$ ,  $c$ ,  $d$ , and  $e$ .

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