



Problem of the Week

Problem C and Solution

Math Test Math 1

Problem

Dilip has had six tests in his math class so far. He knows the average (mean) of some of his marks.

- The average of his first and second test marks is 77%.
- The average of his third and fourth test marks is 75%.
- The average of his fifth and sixth test marks is 82%.

Determine the average of all six test marks for Dilip.

Solution

The average (mean) of all six test marks is equal to the sum of all six test marks divided by 6.

Since the average of Dilip's first and second test marks is 77, it follows that the sum of the first and second test marks is $2 \times 77 = 154$. Similarly, the sum of his third and fourth test marks is $2 \times 75 = 150$, and the sum of his fifth and sixth test marks is $2 \times 82 = 164$. It follows that the sum of all six test marks is $154 + 150 + 164 = 468$. Since $468 \div 6 = 78$, it follows that the average of all six test marks is 78%.