

Answer on Question #77009 – Math – Statistics and Probability

Question

To obtain Grade A, Gumede must achieve an average of at least 75 in six tests. If his average mark for the first five tests is 73, what is the lowest mark he can get in his test and still obtain Grade A?

Solution

The average is equal to the sum of values divided by the number of values.

If the average in first five tests is 73, then the sum for the first five tests S equals $73 \cdot 5 = 365$.

Let x be the mark for the last test. In order to obtain A, Gumede has to get the average

$$\frac{S + x}{6} = \frac{365 + x}{6} \geq 75.$$

So,

$$365 + x \geq 75 \cdot 6$$

$$365 + x \geq 450$$

$$x \geq 450 - 365$$

$$x \geq 85.$$

The lowest mark that Gumede can get in his test and still obtain Grade A is 85.

Answer: 85.