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Math Club Teaser #36

November 20, 2009
(due December 1, 2009)

Solution

All statements contradict each other, so there cannot be more than one that is true. The rest, which are at least five, must be false. This means that statements (1), (2), (3), (4), and (5) all fall short in their counts, so they are false.

What about statement (6)? Squanto said that "some [statements] are true, and some are false", so (6) should be true, and indeed it is true because we now have exactly five false statements. The final solution is that (1)-(5) are false and (6) true.

Solved by:

James Austin, Captain Nemo.