



Problem of the Week

Problem E

Worth Checking

Students in three different classes wrote the same Calculus exam. The exam was marked out of 100.

One class had 22 students in it. After writing the exam, their class average on the exam was reported as 87%. The second class had 27 students in it. After writing the exam, their class average on the exam was reported as 83%. The third class had 31 students in it. After writing the exam, their class average on the exam was reported as 81%.

Three students, Alf, Bet, and Tildi, discussed their results. Alf obtained a mark one less than Bet and Tildi obtained a mark one more than Bet.

Upon reviewing their papers, Alf and Bet both discovered addition errors on their papers. Both of their marks increased to 92. Tildi discovered that one of her questions had not been marked. This review resulted in her mark increasing to 92 as well.

These changes resulted in the exam average for all of the students in the three classes combined changing to exactly 84%.

What marks did Alf, Bet and Tildi originally have on their papers before the errors were corrected?

