Student outwits PSAT question

By Barry S. SURMAN

As a result of an error found by a student at Florida high school, the Educational Testing Service's (ETS) Preliminary Scholastic Aptitude Test (PSAT) last October, approximately 13 million high school students took the qualifying test last October.

The question which caused the difficulty asked students to give the number of faces on the polyhedron resulting from joining two solids - a regular tetrahedron and a square-based pyramid with four equilateral triangular faces - along with a constraint of four faces. The answer expected by ETS, seven, was obtained simply by subtracting two from the sum of the number of faces of the original solids. Lowen realized that four of the original faces would form two parallelogram-shaped faces in the final solid.

When Lowen received his scores and the "correct" answers, he and his father proved mathematically that the solid must have five faces, confirming this with tests performed with cut-out models.

One week after Lowen informed ETS of the error, his score and the 240,000 others were increased. It was also decided not to lower the scores of those who had chosen seven as the answer. Cost of changing the scores, due largely to notification expenses, is estimated at $110,000.

The mistake would not have been discovered, ETS officials admitted, if not for New York State's "truth in testing" law. The law requires the tester to provide copies of the test, correct answers, and individual student responses to those who took the test.

Douglas J. Lowen '56, father of the student, did not think his son would be likely to attend MIT. "He doesn't express a great interest in pursuing a technical career," he commented. Douglas Lowen, who majored in mechanical engineering at MIT, is a systems engineer for environmental control and life support on the space shuttle project for Rockwell International.