opment and exchange of undergraduate mathematics courses and improved teaching methods.

Promising as such ideas may be, however, gaining proper faculty status for the college teacher who, despite his lack of a Ph.D., is nevertheless well qualified to teach undergraduate courses is regarded as essential if the shortage of college mathematics teachers is to be met. According to the Conference Board of Mathematical Sciences, some 800 Ph.D.'s in mathematics are being produced annually—far too few to fill teaching vacancies. Perhaps 120 graduate students drop out each year as Ph.D. candidates after completing all requirements except the dissertation. Some mathematicians speculate that the number attaining this Advanced Graduate Component level might reach between 200 and 300 a year if the students knew that, by thus preparing themselves, they would receive greater professional recognition as teachers and mathematicians. As the CUPM report noted, a few institutions confer an interim degree—such as the "candidate in mathematics" degree awarded by the University of California at Berkeley—as formal recognition of this level of achievement.

One suggestion is to award an "associate Ph.D." for completion of the "advanced graduate component." Yet many college administrators doubt that anything short of a full doctoral degree —though not necessarily a Ph.D.—will ever be accepted as the mark of a fully qualified faculty member.

If, however, by somehow offering greater status and incentives for the non-Ph.D., the annual output of persons qualified for college teaching is increased by even 25 percent, the gain will be significant. For if, say, only two of the six members of a small mathematics department have been trained to the Advanced Graduate Component level, the department may be competent to offer the full range of General Curriculum courses.

As part of its effort to enhance the status of the well-qualified teacher who lacks the Ph.D., CUPM is holding a series of regional conferences with college administrators and mathematics professors. Thus far, two such conferences have been held: the first was conducted last fall in Denver, with 26 institutions from Colorado and several other states represented; at the second, held 2 weeks ago at Columbia, S.C., 20 South Carolina institutions were represented.

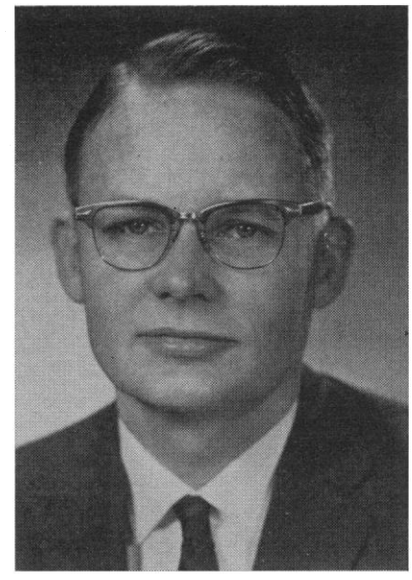
According to Malcolm W. Pownall, executive director of CUPM, which is based in Berkeley, CUPM's recommendations as to the appropriate qualifications for college mathematics teachers drew an interested response from those attending the Colorado and South Carolina meetings. He adds, however, that some of the deans questioned the idea of according the non-Ph.D. who is a competent teacher full status as a faculty member.

Indeed, a number of administrators who have considered the matter feel strongly that CUPM is unrealistic in proposing equal status for such teachers. The point of view expressed by John H. Crabtree, Jr., associate dean for academic affairs of Furman University (a liberal arts college at Greenville, S.C.) and a participant in the recent CUPM conference, appears to be widely held. "They fail to take certain facts of life into account," he says. "As long as the Ph.D. exists, regardless of how many bright young men we certify to teach mathematics, if they lack the Ph.D., the promotions will go to others who have the degree." Furman, he says, grants tenure to the non-Ph.D. who is a good teacher but none is promoted higher than associate professor and most "have to sit it out at the assistant professor level."

Before issuing its report last summer CUPM brought together a group of college presidents and deans to seek their reaction to its recommendations. Among these officials was Everett Derryberry, president of Tennessee Technological University, Cookeville, Tenn., and a member of the Commission on Colleges of the Southern Association of Colleges and Schools (SACS), which is one of the six regional accrediting bodies in the United States. In Derryberry's view, his faculty would never accept the idea that a mathematics teacher who has completed the Advanced Graduate Component (or who

Sproull To Head Defense Science Board

Robert L. Sproull, vice president for academic affairs at Cornell University, has been appointed chairman of the Defense Science Board (DSB), which is the highest-ranking scientific and technical advisory body in the Department of Defense. Sproull succeeds Frederick Seitz, president of the National Academy of Sciences, who on 1 March completed a second 2-year term as DSB chairman. Under John S. Foster, Jr., Defense Director of Research and Engineering, the DSB has lately been given increased responsibility, and, at a time when many academic institutions are experiencing antimilitary sentiments, the Board serves as an important source of guidance for the Department in its relations with the academic world. Sproull formerly headed the Laboratory of Atomic and Solid State Physics and the Materials Science Center at Cornell, and was director of the Defense Department's Advanced Research Projects Agency from 1963 to 1965. Newly appointed as vice chairman of the DSB is Thomas L. Phillips, president of the Raytheon Company, who succeeds Patrick E. Haggerty, chairman of the Board of Directors of Texas Instruments.



Robert L. Sproull

Both Seitz and Haggerty will continue to serve as members of the 28-man Board. Also appointed, as members at large, were John L. McLucas, president of the MITRE Corporation; Ithiel de Sola Pool, chairman of the M.I.T. political science department; and Albert D. Wheelon, vice president of the Hughes Aircraft Co.—D.S.G.