Edward O. Thorp, an instructor in MIT's Mathematics Department, has recently published preliminary results of a study on "A Favorable Strategy for Blackjack." Intrigued by the possible applications of probability theory to the standard gambling games, Thorp has visited every major casino and numerous minor establishments in Nevada and New Jersey. Through trials of lesser significance, or ones he has been unable to reach, he has investigated the use of various variations in rules and betting procedures in professional gambling haunts lends his added air of authenticity to his report, and gives his own merits. Analysis of present variations shows a corresponding change in expectation of, at most, 0.5% from the theoretical figures.

**Complex Model with Computer**

Thorp refers to an earlier study of blackjack which considered the same game four years before. Independent trials, i.e., the player does not keep track of cards already used. Simplifying assumptions were necessary to keep the computations within the bounds of a desk calculator.

With the advantage of a high speed computer, it was possible to dispense with many of these approximations. The former value of player expectation (winning) was -4.0% least unfavorable among current gambling games. The new result is -21% for a one player game.

In addition, the computer allowed consideration of unusual sets of arbitrary combination of cards, thus making possible calculations on the basis of seen cards. The consequent dependent trial viewpoint "makes the determination of a winning strategy possible." Those interested in running for either UAP or class officers must file their petitions with the Campus, and investigated. Offers of as-

### UAP Candidates Uncommitted

Elections Scheduled for March 14

Elections for undergraduate Association President and Class Officers for next year will be held on Tuesday, March 14. Besides the officers mentioned above, the president, vice-president, and secretary for the class of '61 and the members of the Senior Executive Committee will be elected.

Those interested in running for either UAP or class officer must file their petitions with the Campus on or before February 28.

### Area Coaches Pick Tech Star to All-New England Team

Dave Koch, high scoring center of Tech's much-improved basketball squad, has been named to the All-New England first team by a vote of the coaches of the Greater Boston area.

The 6'4" junior from Wichita, Kansas, is currently the leading scorer in the Boston collegiate circuit with an average of 24 points per game and is among the top thirty scorers in the nation. Coach John Barry has been named coach of the week by the same group earlier in the season.

### Group Investigates Small Businesses

A group known as the 1961 Business Search group is investigating the usual procedures of job recruiting. The group has organized to search out job positions in small companies throughout the U.S. Members of the group are completing the school year with the hope of finding employment in their chosen fields. The group will be meeting in the future to discuss their findings.

### The Tech Discloses Vol. LXIII Board

At a special all-staff banquet on January 20th, The Tech made known the names of the Board of Directors of Volume LXIII. This year's chairman, Linda G. Saperstein, acting as master of ceremonies, announced the following new officers: Chairman, Anne M. McFarland; Executive Editor, Thomas Brydges '62; Editor, Carl Wanscher '62; News Editor, Edward Golightly '63; Sports Editor, Sandy Wagner '63; Business Manager, Pete Reveley; and Photo Ed, Curtis Wiler '63.

### Foundation Awards MIT $475,000 for Center

The Carnegie Corporation of New York announced Monday the award of a $475,000 grant to MIT for studies in connection with the Center for International Studies. The grant is to be used for research deals with the problems encountered in "nation-building," particularly in the emerging nations in Africa and Asia.

### Goldwater Lectures On Conservatism At Kresge Tonight

Republican Senator Barry M. Goldwater of Arizona will speak tonight at 8 p.m. in Kresge Auditorium in a free lecture presented by the Lecture Series Committee. Senator Goldwater's address is said to be the most outspoken proponent of the conservative school of government currently in the public eye. He is the author of the best-selling political work, "Conscience of a Conservative."

The name of Senator Goldwater was placed in nomination in opposition to that of Vice President Nixon for the Presidency, at the Republican Convention, and although he did not receive the nomination, his name appeared in the November election when unpledged electors from Louisiana cast their vote for him as Vice President. Senator Goldwater's address will be titled "Principles of Conservatism" and is expected to be well attended.

In 1960 the physical plant consumed 1,606,466 gallons of oil; 26,160 kilowatts of electricity; 307,281,100 cu. ft. of gas and 3,375 cases of paper towels.

### MIT Offers Course On Arms Problems

Thanks to the efforts of Dick Stein and Don Walsow '62, MIT now has a course on arms control, more formally named as "The Arms Control in the Context of the Present World Struggle." The course is taught by Professor L. B. Bloomfield who is associated with MIT's Center for International Studies and a former member of the State Department as well.

Enrollment of the course was made available to anyone interested, as no prerequisites were required "other than a general knowledge of current events." Due to this, as well as to the fact that students from Harvard and other local colleges are able to enroll, the course will be taken by several students.

The course will be centered about weekly seminars, with lectures by noted speakers and the possibility of two-hour weekly sessions will commence with a lecture by Professor Bloomfield, followed by his discussion with the students.

### Students Protest Rockwell

Many MIT students participated in the demonstration against Nazi picketing of the movie Exodus last month. See page 3 for story and pictures.

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*Photo by Curtis Wiler '63*