



Activity 4: Approval Voting

Student Page

Approval Voting is a procedure in which voters can vote for as many candidates as they wish. Each approved candidate receives one vote, and the candidate with the most votes wins.

Approval Voting has the following advantages over other voting procedures:

- It gives voters more flexible options.
- It helps elect the strongest candidate.
- It reduces negative campaigning.
- It increases voter turnout.
- It gives minority candidates their proper due.
- It is very practical.

A. The participants in a summer school recreation program decided to vote on which activity they preferred, Running Track, Softball, Badminton, or Swimming. The winning activity was determined by Approval Voting.

The following summarizes the responses of the participants:

12 participants voted for Swimming and Badminton.

5 participants voted for Badminton, Running Track, and Softball.

10 participants voted for Running Track and Badminton.

13 participants voted for Softball and Badminton.

1. How many total votes did Swimming receive?
2. How many total votes did Badminton receive?
3. How many total votes did Running Track receive?
4. How many total votes did Softball receive?
5. Which activity is selected by the summer school participants using Approval Voting?

B. Frisbee is a growing sport at Tama High. The Frisbee Club is sponsoring a weekend event, and each participant will receive a T-shirt. Club members decided to let the participants vote on the color of the T-shirt, using Approval Voting. The possible colors are Steel Gray, Robin's Egg Blue, Eggshell, Candy Apple Red, and Sunflower Yellow. Here is a summary of the results:

- 12 participants voted for Steel Gray.
- 7 participants voted for Steel Gray and Sunflower Yellow.
- 20 participants voted for Eggshell and Candy Apple Red.
- 18 participants voted for Robin's Egg Blue, Eggshell, and Candy Apple Red
- 23 participants voted for Sunflower Yellow and Robin's Egg Blue.
- 25 participants voted for Candy Apple Red.

Use Approval Voting to determine the color of the tee-shirt.

C. Summary

Milbourn State University marching band has been invited to march in 5 different parades: the Rose Bowl parade, the Hula Bowl parade, the Cotton Bowl parade, the Orange Bowl parade, and the Sugar Bowl parade. The 100 band members were asked to rank the parades from 1st choice to 5th choice. Then results were summarized in the following preference schedule.

	39	16	45
1 st	Rose	Hula	Cotton
2 nd	Hula	Sugar	Hula
3 rd	Cotton	Orange	Sugar
4 th	Orange	Cotton	Orange
5 th	Sugar	Rose	Rose

The University now has to decide what to do with this information.

1. Suppose the University decides to choose the parade using Plurality with Elimination. Which parade will be chosen?

2. Suppose the University decides to choose the parade using Pairwise Comparisons. Which parade will be chosen?

3. Suppose the University decides to choose the parade using the Borda Count method. Which parade will be chosen?

4. Suppose the University decides to try Approval Voting. Which parade is chosen if, after re-polling, each band member approves only his/her first, second, and third choices?

5. Suppose the University decides to try Approval Voting. Which parade is chosen if, after re-polling, each band member approved only his/her first and second choices?

6. Suppose the University decides to try Approval Voting. Which parade is chosen if, after re-polling, each band member whose first choice was the Cotton Bowl approved only of the Cotton Bowl, but everyone else approved of his/her first three choices?