

Definitions:**Approval Voting Method:** (pg. 45)**Examples:**

Approval Voting: (pg. 45) An 11-member committee has 5-members running for chair: Hart, Alvarez, Wolsey, Hanson, and Park. The committee decides to use the approval voting method in the election. The results are listed below, where an \checkmark indicates approval of the candidate.

	1	1	3	1	2	1	2
Hart			\checkmark			\checkmark	\checkmark
Alvarez	\checkmark		\checkmark	\checkmark		\checkmark	\checkmark
Wolsey					\checkmark		\checkmark
Hanson				\checkmark			
Park		\checkmark			\checkmark	\checkmark	\checkmark

Comparing Voting Methods: (# 11 pg. 54) A condominium association must vote to determine what color to paint the wood trim of a building. The three choices are white, green, and ivory. The preference rankings of the association members and the colors of which they approve are shown in the table below.

	4	3	2	1	2	2	4	2	1
White	1 ✓	1 ✓	1 ✓	2 ✓	3	3	2	3	3
Green	2	3	3	1 ✓	1 ✓	1 ✓	3	2	2 ✓
Ivory	3	2	2 ✓	3	2	2 ✓	1 ✓	1 ✓	1 ✓

1. Which color would win a plurality vote?
2. Which color would win a plurality vote with a runoff between the top two colors?
3. Which color would win the Borda count?
4. Which color, if any, is the Condorcet winner?
5. Which color would win an approval vote?
6. Could the five voters with first choice white and second choice ivory have obtained a preferable result in an approval vote by voting strategically if the others voted as shown in the table?