

Poll Question: Many different factors go into the decision of where to attend college. From the list of the following candidates, please rank which of the candidates most strongly influenced your decision of where to attend college. Please rank a 1st, 2nd, 3rd, 4th, and 5th choice, with the 1st being the most influential and the 5th being the least influential. Please do not mark any ties between candidates.

Results: Excluding 2 ties, there were 24 ballots and 19 different ballot types.

2	1	1	2	1	2	1	2	2	1	1	1	1	1	1	1	1	1	
A	B	C	D	B	D	B	C	C	A	D	D	B	B	C	A	B	B	B
C	C	B	C	D	E	C	E	E	D	A	B	E	D	D	E	D	E	C
E	E	A	B	C	B	E	A	A	C	E	C	C	E	B	C	E	D	A
B	D	E	E	E	C	A	D	B	E	B	E	D	A	E	B	C	C	E
D	A	D	A	A	A	D	B	D	B	C	A	A	C	A	D	A	A	D

1. School Size

2. Location

3. Social Life

4. U.S News and World Report Ranking

5. Price

1	2	3	4	5
-	13	16	14	20
13	-	14	15	16
9	12	-	14	19
12	11	12	-	15
6	9	7	11	-

KEY

A = Price

B = Location

C = School Size

D = US News + World Report Rank

E = Social Life

	Price	Location	School Size	U.S News and World Report Ranking	Social Life
1.	5	1	3	2	4
2.	5	1	2	4	3
3.	5	1	3	4	2
4.	5	3	1	2	4
5.	5	3	4	1	2
6.	5	5	3	1	2
7.	4	1	2	5	3
8.	5	3	4	1	2
9.	4	1	2	3	2
10.	3	4	1	5	2
11.	3	5	1	4	2
12.	5	3	2	1	4
13.	5	1	4	2	3
14.	3	1	2	5	4
15.	4	1	5	2	3
16.	1	4	2	5	3
17.	1	5	3	2	4
18.	5	2	3	1	4
19.	3	5	1	4	2
20.	3	2	1	5	4
21.	5	3	2	1	4
22.	5	1	4	3	2
23.	2	4	5	1	3
24.	3	4	1	5	2
25.	1	4	2	5	3
26.	1	4	3	5	2

majority candidate

needs $> \frac{n}{2}$ 1st place votes = > 12

A = 4

B = 8

C = 6

D = 6

E = 0

1st place votes

NO MAJORITY CANDIDATE

condorcet candidate

needs to beat every other candidate in head to head competition

no condorcet candidate

- Rank 1: School Size (2): vs. 1 : (13 - 13) vs. 3 : (12 - 14) vs. 4 : (9 - 16) vs. 0 : (6 - 20)
- Rank 2: Location (1): vs. 4 : (12 - 14) vs. 3 : (11 - 15) vs. 0 : (9 - 16)
- Rank 3: Social Life (4): vs. 3 : (12 - 14) vs. 0 : (7 - 19)
- Rank 4: U.S News and World Report Ranking (3): vs. 0 : (11 - 15)
- Rank 5: Price (0): vs. 3 : (15 - 11)

One-to-one comparisons

A:B - 9:15 B:D - 14:10
 A:C - 6:18 B:E - 13:11
 A:D - 11:13 C:D - 13:11
 A:E - 7:17 C:E - 16:8
 B:C - 12:12 D:E - 11:13

pairwise points

A: 0 total = 10
 B: 3.5
 C: 3.5
 D: 1
 E: 2

pairwise $W = \{B, C\}$

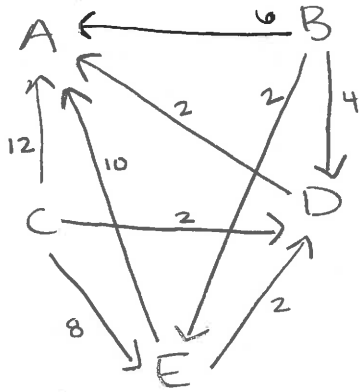
Plurality Winner

A: 4
 B: 8
 C: 6
 D: 6
 E: 0

} 1st place votes

$W = \{B\}$

$n=5$, pairwise pts = $4+3+2+1 = 10 \checkmark$



$\{B, C\} < \{B, C, E\} < \{B, C, D, E\} < \{A, B, C, D, E\}$

Smith set: $\{B, C\}$

runoff method

1st place votes: ~~A=4~~ B=8 C=6 D=6 E=0
 B vs C vs D

w/new pref sched, 1st place votes: B=8 C=9 D=7
 B vs C $\rightarrow 12:12$

$W = \{B, C\}$

elimination method

1st round: A=4 B=8 C=6 D=6 ~~E=0~~
 eliminate E

2nd round: ~~A=4~~ B=8 C=6 D=6
 eliminate A

3rd round: B=8 C=9 ~~D=7~~
 eliminate D

4th round: B=12 C=12

$W = \{B, C\}$

coombs method

1st round: ~~A=1~~ B=3 C=2 D=8 E=0
 eliminate A

2nd round: B=3 C=6 ~~D=10~~ E=5
 eliminate D

3rd round: B=8 C=7 ~~E=9~~
 eliminate E

4th round: B=12 C=12

$W = \{B, C\}$

Beatpath

BDA (6 > 0)

BDD (4 > 0)

CDE (8 > 0)

$W = \{B, C\}$