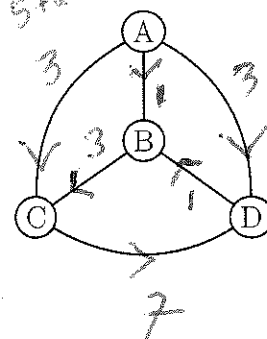


Front

For each head-to-head matchup (A vs B, A vs C, ...), calculate who is favored. Draw in the arrows on the picture to show who should beat whom (Win \rightarrow Lose), and put the "margins" (by how much) on the lines.

| | 5 | 4 | 2 |
|-----|---|---|---|
| 1st | B | C | A |
| 2nd | A | D | D |
| 3rd | C | A | B |
| 4th | D | B | C |



(a) Who is the best? Is there disagreement?

A! A beats everyone.

(b) Who is in last place? Why?

Hard to say. B, C, D all beat each other. D gets trounced by C, so maybe C is ranking? (Kylian's rule)

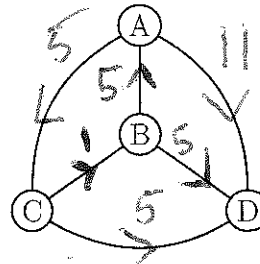
(c) If you were writing for C's newspaper, how would you spin the story?

C came back strong with a decisive victory against D, who just last week was expected to beat B by 1.

Draw in the arrows and the margins.

Win \rightarrow Lose

| | 5 | 3 | 3 |
|-----|---|---|---|
| 1st | B | C | A |
| 2nd | A | B | D |
| 3rd | C | A | C |
| 4th | D | D | B |



(a) Who is the best? Is there disagreement?

Hard to say. A, B, C all beat each other. Maybe A b/c it beat D the most. Not C. It barely beat B.

(b) Who is in last place? Why?

D! Everyone beats D

(c) If you were writing for C's newspaper, how would you spin the story?

What an exciting game! A real nail biter. C pulled through at the end, beating B who was expected to beat the favorite "A" by 5 points!

Back

Let's work out the winners for this preference schedule. For each method, calculate the points for every candidate and then circle the winner.

| | 10 | 7 | 6 | 4 | 4 |
|-----|----|---|---|---|---|
| 1st | E | A | D | D | A |
| 2nd | C | C | E | C | C |
| 3rd | B | B | A | A | D |
| 4th | D | E | B | B | B |
| 5th | A | D | C | E | E |

(a) Plurality: 1 point for first, none for the rest

A 7+4 D 6+4
B 0 E 10
C 0

A wins (11 > 10 > 10 > 0 > 0)
A
DE
BC

(b) Anti-plurality: -1 point for last, none for the rest

A -10 D -7
B 0 E -8
C -6

B wins (0 > -6 > -7 > -8 > -10)
B
C
D
E
A

(c) Combo: 1 point for first, -1 for last, none for the rest

A 11-10 D 10-7
B 0+0 E 10-8
C 0-6

D wins (3 > 2 > 1 > 0 > -6)
D
E
A
B
C

(d) Borda: 5 for first, 4 for second, 3 for third, 2 for fourth, 1 for last

(or faster: 2 for first, 1 for second, 0 for third, -1 for fourth, -2 for last; then add 3(10+7+6+4+4) = 93 to each score)

A 2(11) + 0 - 0 - 2(10) + 93 = 95
B 0 + 0 - 14 - 0 + 93 = 79
C 0 + 25 - 0 - 2(6) + 93 = 106

D 2(10) + 0 - 10 - 2(7) + 93 = 84
E 2(10) + 6 - 7 - 2(8) + 93 = 96

C wins

C
E
A
D
B

(e) Pairwise comparison:

A vs B

-10 + 7 + 6 + 4 + 4
+11

A vs C

-10 + 7 + 6 + 4 + 4
3

A vs D

-9

A vs E

-1

B vs C

-19

E

B vs D

3

B vs E

-1

C vs D

11

C vs E

-1

D vs E

-3

E

Points: A 2 Win

B 1 Win

C 2 Wins

D 1 Win

E 3 Wins

2pts

1pt

2pts

1pt

3pts

E wins, Undefeated!

A → C
B → D