

### Quiz 7

1. Consider the following example for questions (a)–(g).

9	6	2	7
A	C	C	B
C	B	A	A
B	A	B	C

ballot change  
→  
for A

9	6	2	7
A	C	<b>A</b>	B
C	B	<b>C</b>	A
B	A	B	C

(a) Who is/are the winners for plurality in the election on the left? (1 pt)  $W_P = \{ \text{_____} \}$

(b) Who is/are the winners for runoff in the election on the left? (1 pt)  $W_R = \{ \text{_____} \}$

(c) Consider the ballot change favorable to A, pictured above right.

After this ballot change:

i. What is the NEW winner set for plurality? (1 pt)  $W'_P = \{ \text{_____} \}$

ii. What is the NEW winner set for runoff? (1 pt)  $W'_R = \{ \text{_____} \}$

(d) Which winner selection method fails to satisfy monotonicity for this example?

Circle all the apply (2 pts):

plurality

runoff

Choose one of the above and explain why it does or does not satisfy monotonicity for this example (2 pts):

2. Circle T if the claim is true, F if the claim is false. (1pt each)

(a) The beatpath method is a priori Smith fair. T      F

(b) The beatpath method has no losing spoilers ever. T      F

PLEASE WRITE YOUR NAME ON THE BOTTOM OF THIS PAGE

Name: \_\_\_\_\_