Poll Description: New Broadway Plays The Broadway theatre has successfully adapted many literary and cinematic classics to the stage. Please rank, which books and films you would like to see adapted next (1 most strongly preferred). Also no ties, thanks!

Results: Excluding 1 tie, there were 23 ballots and 20 different ballot types.

```plaintext
A: B 9:14
A: C 11:12
A: D 12:11
A: E 11:12
B: C 11:12
B: D 11:12
B: E 11:12
C: B 11:12
C: D 11:12
C: E 11:12
D: E 12:11
```

Majority candidate needs \( \frac{N}{2} + 1 \) 1st place votes

- A: 5
- B: 5
- C: 4
- D: 6
- E: 3

First place votes

```
N = 5
N = 23
```

Condorcet candidate: NONE

Smith Set:

```
A > B > C > D > E > C
```

```
Oo = S = [D, A, E, C, B]
```

Runoff: A, B (5,5), and D (6) (see first place votes)

Because runoff was done with three candidates

Runoff B: D (B wins 2nd place in above)

```
W = D
```

Elimination:

```
One shot: D ∧ B ∧ A ∧ C ∧ E
```

Recursive: Round 1: Eliminate D (winner of one-shot)
Round 2: Eliminate B (Spaint), A (Spaint) and
Eliminate C (Spaint)

```
W = E
```

Round 3: A = 7 points
B = 9 points
C = 9 points so eliminate A

Runoff B: C

```
W = C
```

Round 4: A: B

```
9:14
```

```
W = B
```

Thus, D ∈ E ∧ C ∧ B ∧ A

Plurality: (# see majority can. for 1st place votes)

One shot: [D ∧ A ∧ B ∧ E]C Y E

Recursive: Round 1: Eliminate D (winner of one-shot)
Round 2: Eliminate E
Round 3: Eliminate B and C

```
D ∈ E ∧ B ∧ C ∧ A
```

Pairwise:

```
A: 1
B: 1
C: 2
D: 3
E: 3
total = 10
```

```
eum B E C = 1
```

```
D ∈ E ∧ B ∧ C ∧ A
```

```
A: B
```

```
9:14
```

```
W = B
```

Thus, D ∈ E ∧ C ∧ B ∧ A
### Ballot Report:

<table>
<thead>
<tr>
<th>Glamaorama</th>
<th>Persuasion</th>
<th>Dial M</th>
<th>GoodFellas</th>
<th>Million Dollar Baby</th>
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<tbody>
<tr>
<td>1.</td>
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<td>24.</td>
<td>5</td>
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<td>3</td>
<td>1 (2)</td>
</tr>
</tbody>
</table>

### 1. Persuasion (1817) by Jane Austen

1 11 12

### 2. Dial M For Murder (1954) directed by Alfred Hitchcock

1 11 12

### 3. Glamaorama (1998) by Bret Easton Ellis

10 13 12

### 4. GoodFellas (1990) direct by Martin Scorsese

12 12 12 11

### 5. Million Dollar Baby (2004) directed by Clint Eastwood

1 12 12 12
Extra Credit Vote Gradesheet

Name: Broadway Plays

Setup of poll (30):

- substantive question
  - $n \geq 5$ (10) ✓
  - $N \geq 20$ (10) ✓

Presentation (40):

- 1 sheet of paper, no glue, no tape, no staples (10) ✓
- detailed ballots from website (10) ✓
- 1-1 comparison results from website (5) ✓
- beatpaths results from website (5) ✓
- few ties, and they are marked (5) ✓
- organized and legible, question and key (5) ✓

Analysis (80):

- preference schedule and 1-1 comparisons (12) ✓
- statement of number of ballot types (2) ✓
- graph with margins (12) ✓
- Smith set (4) ✓
- statement about Majority candidate (2) ✓
- statement about Condorcet candidate (2) ✓
- credit for no Condorcet candidate? (10) ✓
- beatpath winner(s) (8) ✓
- runoff winner(s) (4) ✓
- plurality winner(s) (5) ✓
- elimination winner(s) (8) ✓
- pairwise winner(s) (8) ✓
- check on pairwise points (3) ✓

Grade (of 150 possible points): 148/150