A committee of twenty people is trying to decide which of four departments is going to get funding. The four departments are Art (A), English (E), History (H), and Political Science (P). Their preference ballots look as follows:

| A | P | A | E | P | E | P | A | A | E | P | P | P | E | E | E | E | P | P | A |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| H | A | H | A | E | A | A | H | H | A | E | E | A | A | A | A | A | E | A | H |
| E | E | E | P | A | P | E | E | E | P | A | A | E | P | P | P | P | A | H | E |
| P | H | P | H | H | H | H | P | P | H | H | H | H | H | H | H | H | H | E | P |

1. Create a preference schedule based on the above ballots:

| \# of voters: |  |
| :---: | :--- |
| $1^{\text {st }}$ |  |
| $2^{\text {nd }}$ |  |
| $3^{\text {rd }}$ |  |
| $4^{\text {th }}$ |  |

2. Using the plurality method, which choice wins?
3. Who is the winner using plurality with elimination (also called "instant runoff voting")? (show steps clearly!)

Repeat your preference schedule here:

| \# of voters: |  |
| :---: | :--- |
| $1^{\text {st }}$ |  |
| $2^{\text {nd }}$ |  |
| $3^{\text {rd }}$ |  |
| $4^{\text {th }}$ |  |

4. Who is the winner using the Borda count method? (Show the computations to calculate Borda points for each department.)
5. How many different ballots were possible for this election? (Show the formula)
