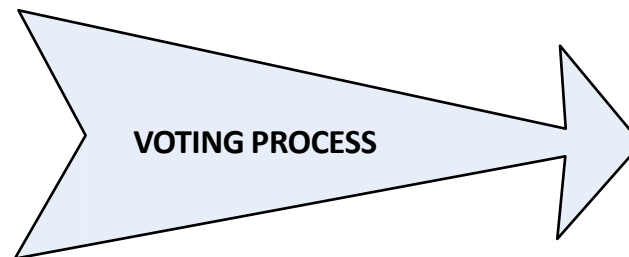
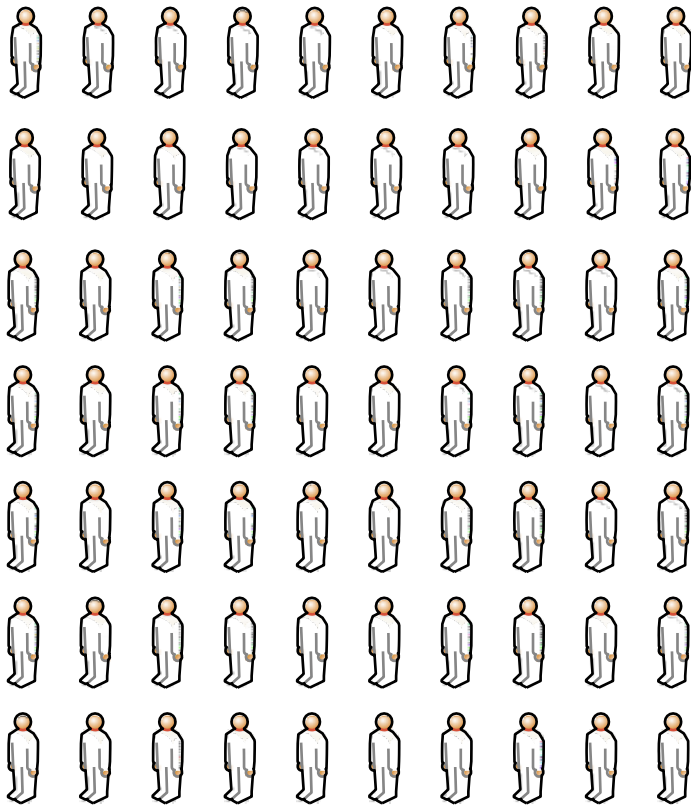


# Evaluative Proportional Representation: A Figurative Explanation

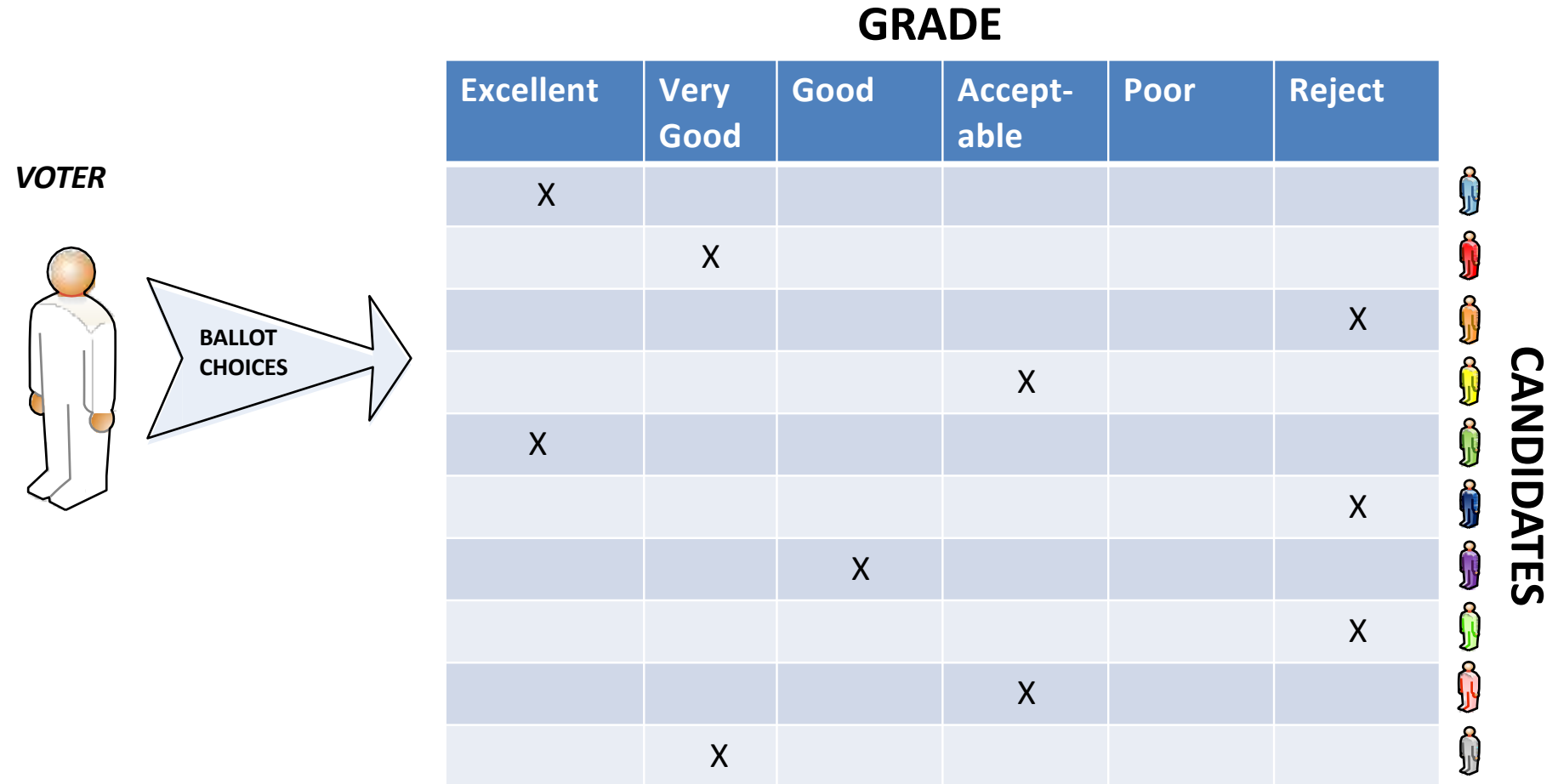
Unlike any existing voting method, Evaluative Proportional Representation (EPR) allows every citizen's vote to count proportionately in the legislative body such as a city council. These pages describe how EPR works.



CANDIDATES

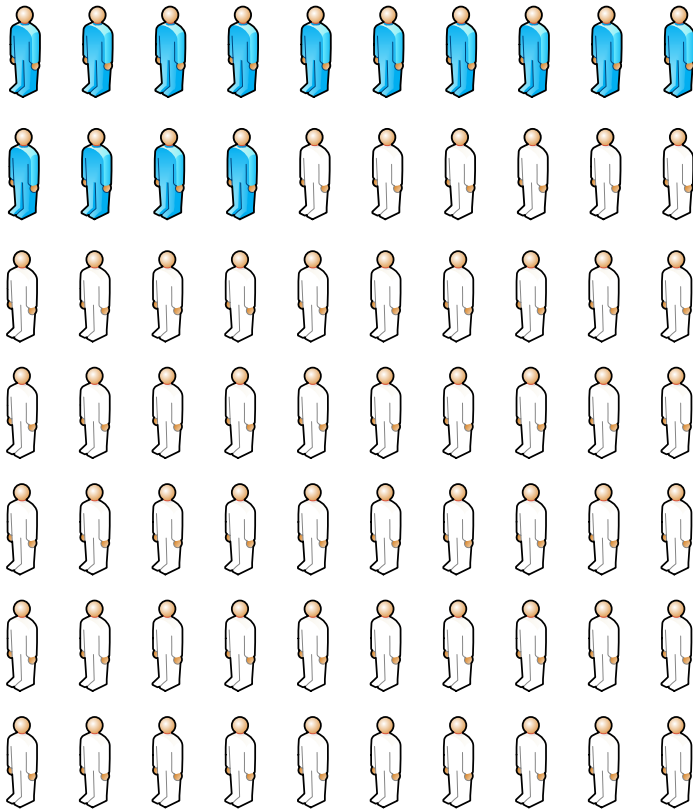
This illustration shows an electorate composed of 70 citizens. They elect the 7 council members from the 10 color-coded candidates. After assessing the ideal qualities needed by the office, citizens grade each candidate as either Excellent (*ideal*), Very Good, Good, Acceptable, Poor, or "Reject" (*entirely unsuitable*). The seven that receive the highest number of highest available grades are elected.

# How the Voting Works



Citizens vote by grading as many of the color-coded candidates as they want. The more citizens' votes a winner receives, the more voting power (more *weighted votes*) they will have in the city council. If they want, each voter can give the same grade to more than one candidate. Any ungraded candidates will automatically be counted as "Reject" by the voter. The count determines to which candidate's running total a citizen's vote is added. In the visual explanations below, the voter is given the same color as the candidate that received their vote.

## First Step of the Vote Count

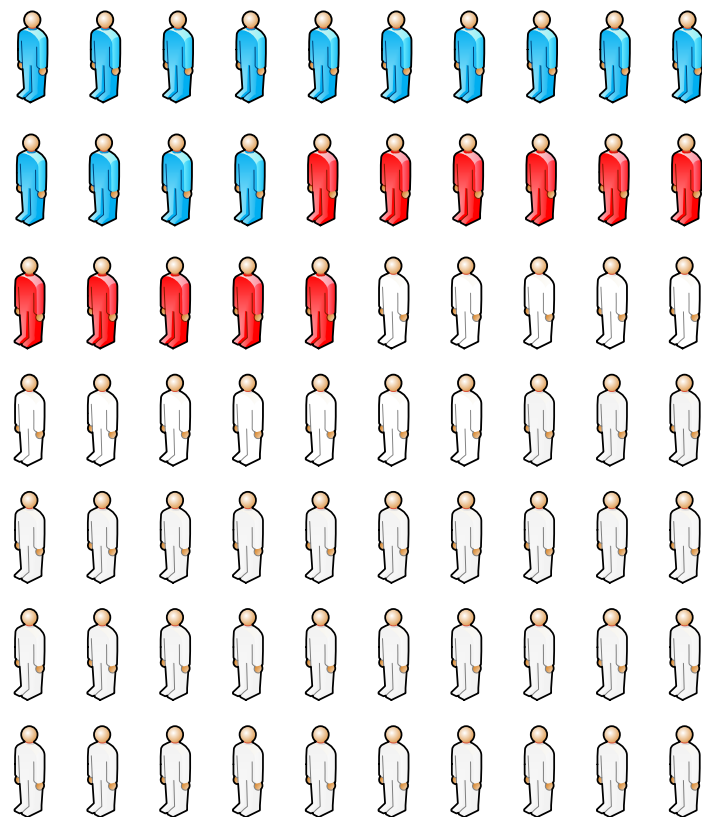


Each step of the vote count determines which votes are to be added to the candidates' running totals. If a voter gave "Excellent" to more than one candidate, this "Excellent" is added to the candidate who will have the highest running total at that stage of the count. So, only the candidate who acquires the largest number of the highest available grades at each stage of the count retains those votes—retains them *exclusively*.

As a result of this allocation of these votes, all the grades awarded to other candidates by these voters' ballots are marked as "used" and removed from the count unless this candidate receives more votes than allowed by a vote limit or is not one of the winners.

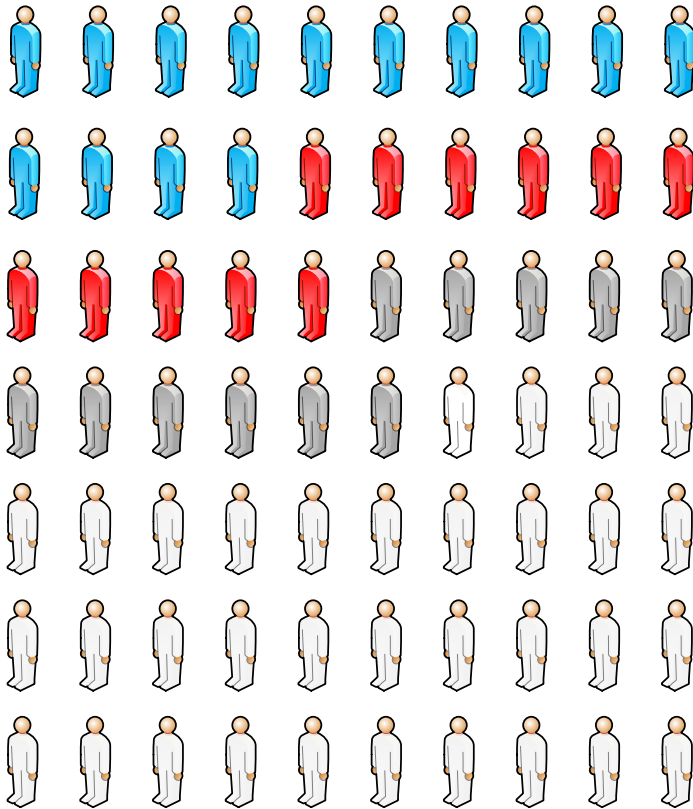
In this scenario, 14 out of 70 voters have exclusively given their votes to the running total of candidate **blue**. This leaves 56 ballots to be counted.

# Second Step of the Vote Count



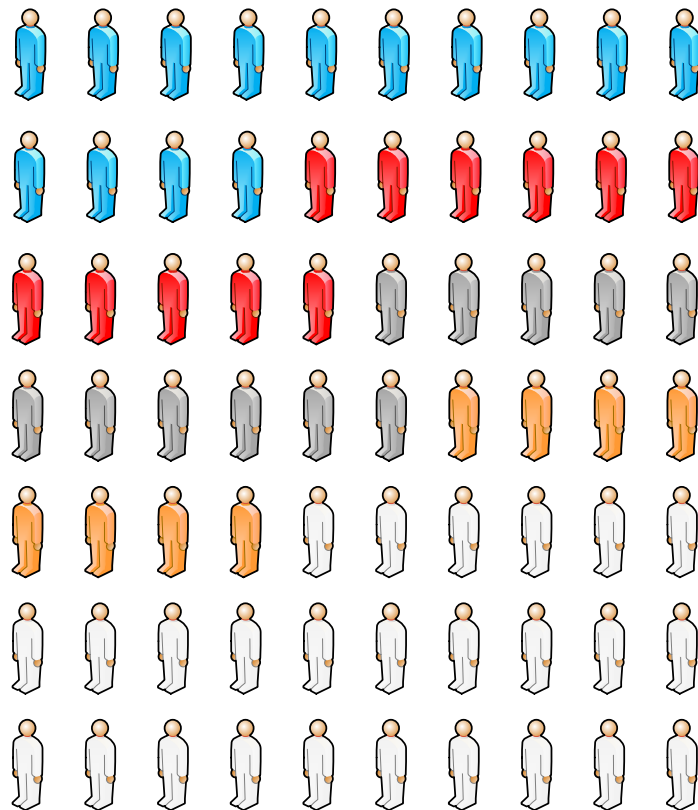
Similarly to the first step, the second step of the vote count determines that 11 highest available grades from the remaining 56 ballots are given exclusively to candidate red. This leaves 45 ballots to be counted.

## Third Step of the Vote Count



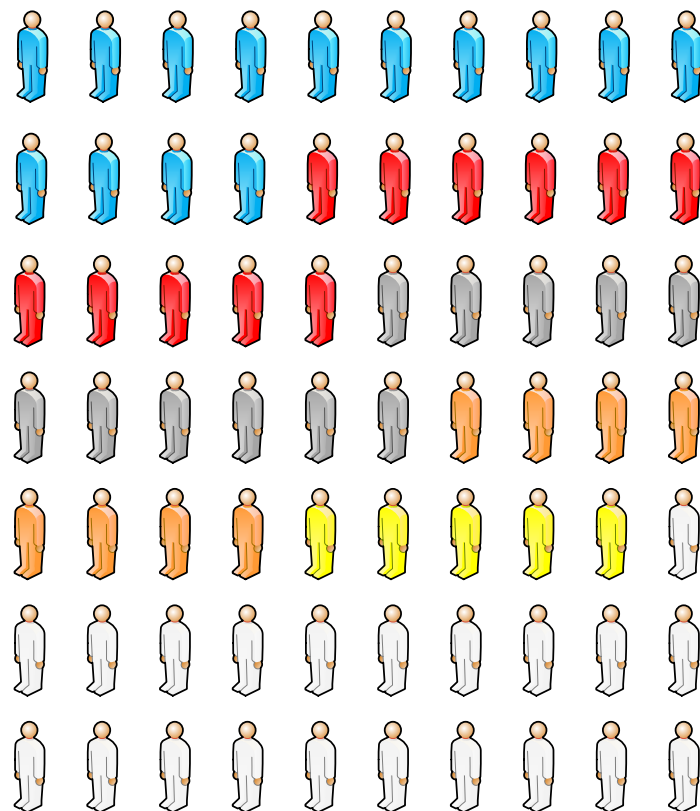
The third step of the vote count determines that 11 highest available grades from the remaining 45 ballots are given exclusively to candidate **gray**. This leaves 34 ballots to be counted.

# Fourth Step of the Vote Count



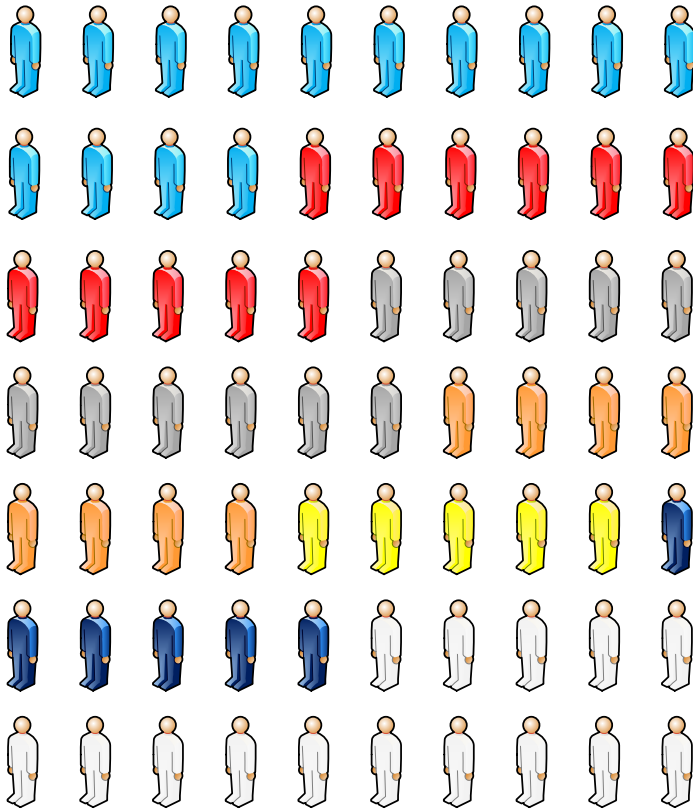
The fourth step of the vote count determines that 8 highest available grades from the remaining 34 ballots are given exclusively to candidate orange. This leaves 26 ballots to be counted.

# Fifth Step of the Vote Count



The fifth step of the vote count determines that 5 highest available grades from the remaining 26 ballots are given exclusively to candidate **yellow**. This leaves 21 ballots to be counted.

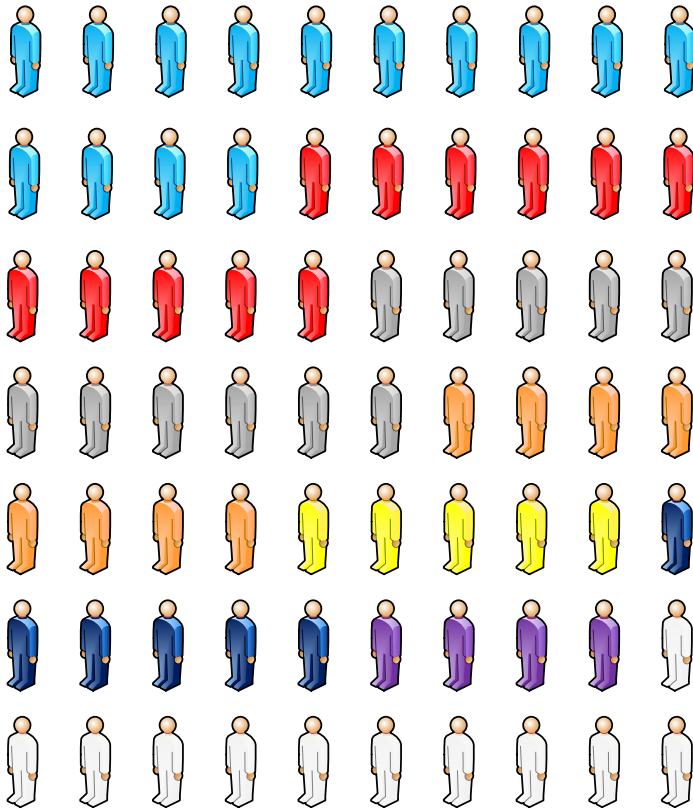
## Sixth Step of the Vote Count



The sixth step of the vote count determines that 6 highest available grades from the remaining 21 ballots are given exclusively to candidate **dark-blue**. This leaves 15 ballots to be counted.

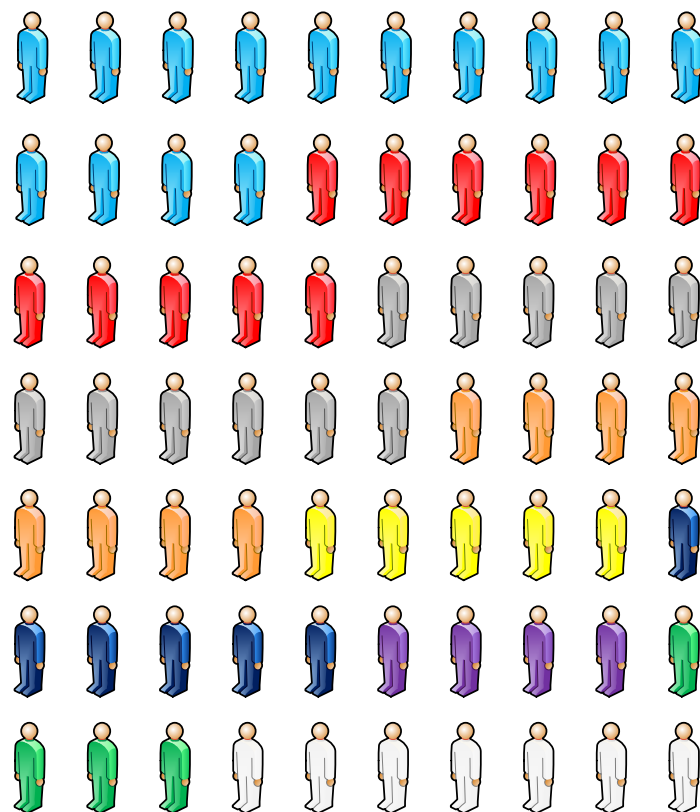


## Seventh Step of the Vote Count



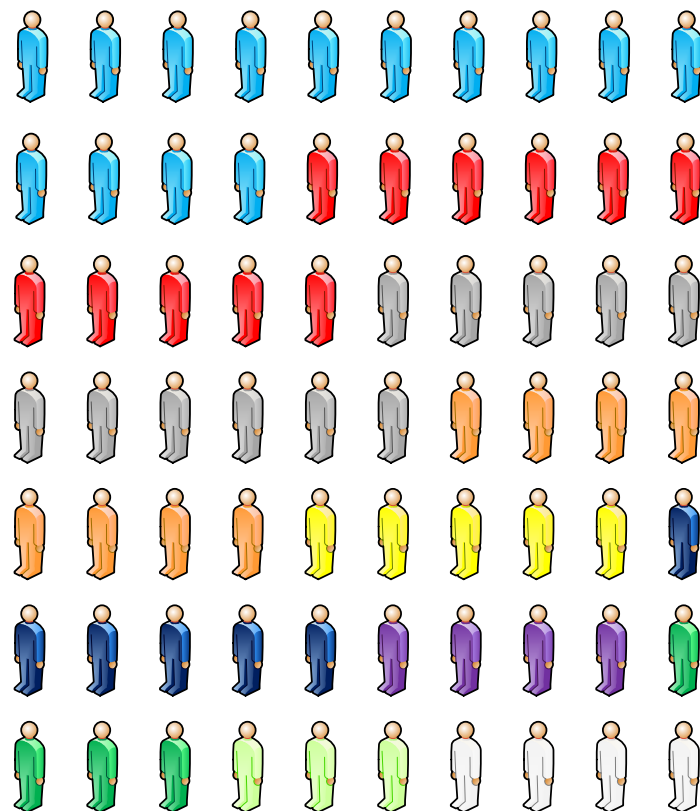
The seventh step of the vote count determines that 4 highest available grades from the remaining 15 ballots are given exclusively to candidate **purple**. This leaves 11 ballots to be counted.

# Eighth Step of the Vote Count



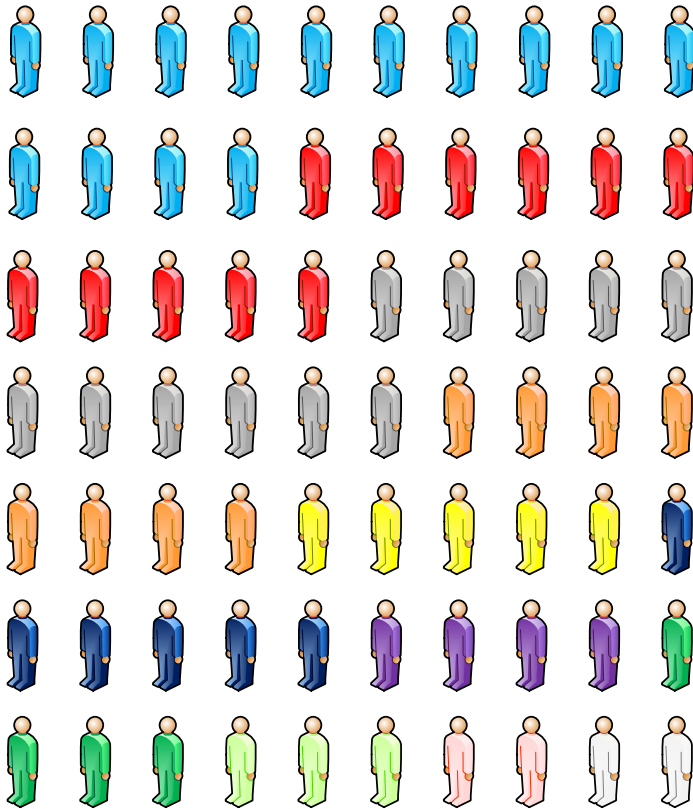
The eighth step of the vote count determines that 4 highest available grades from the remaining 11 ballots are given exclusively to candidate green. This leaves 7 ballots to be counted.

# Ninth Step of the Vote Count



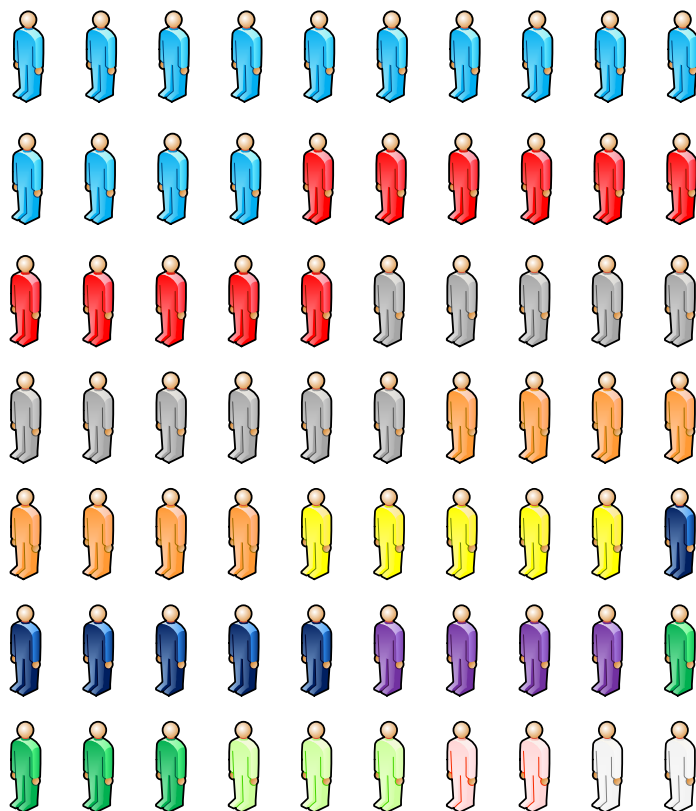
The ninth step of the vote count determines that 3 highest available grades of the remaining 7 ballots are given exclusively to candidate light-green. This leaves 4 ballots to be counted.

## Tenth Step of the Vote Count



The tenth step of the vote count determines that 2 highest available grades of the remaining 4 ballots are given exclusively to candidate **pink**. This leaves 2 ballots to be counted.

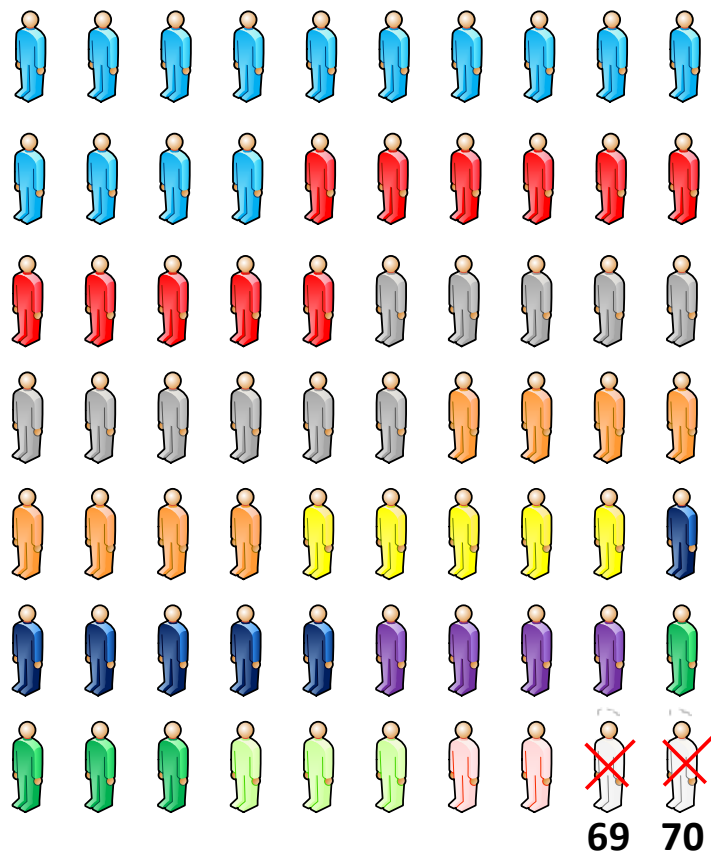
# First through Tenth Steps of the Vote Count



The first through tenth steps of the vote count determine that 68 of the 70 ballots have given their highest available grades exclusively to one of the following candidates. This leaves two ballots to be examined.

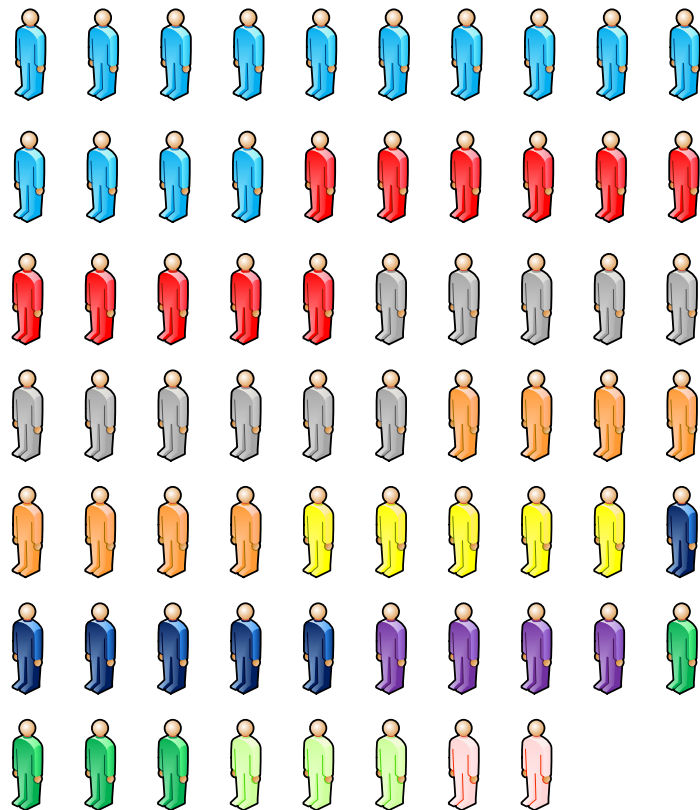
| Step | Color              | Votes |
|------|--------------------|-------|
| 1    | <u>Blue</u>        | 14    |
| 2    | <u>Red</u>         | 11    |
| 3    | <u>Gray</u>        | 11    |
| 4    | <u>Orange</u>      | 8     |
| 5    | <u>Yellow</u>      | 5     |
| 6    | <u>Dark-blue</u>   | 6     |
| 7    | <u>Purple</u>      | 4     |
| 8    | <u>Green</u>       | 4     |
| 9    | <u>Light-green</u> | 3     |
| 10   | <u>Pink</u>        | 2     |

# Eleventh Step of the Vote Count



The eleventh step of the vote count determines that voters' ballots 69 and 70 give a "Reject" to all of the candidates. These two votes cannot be added to any candidate.

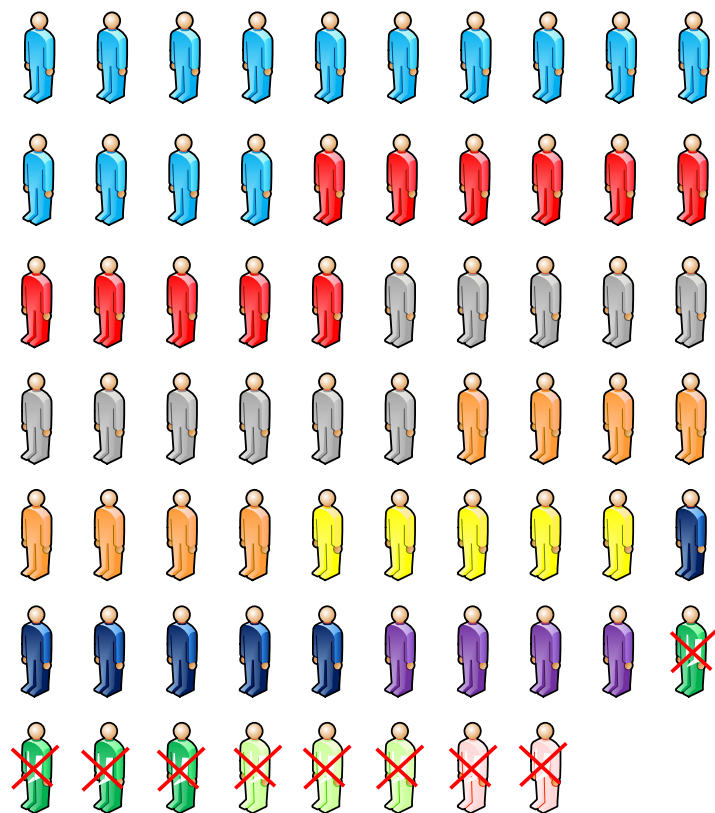
# Order of the Candidates



The running totals for all ten candidates after completion of the vote count steps are:

|                      |    |
|----------------------|----|
| <u>Blue</u> -        | 14 |
| <u>Red</u> -         | 11 |
| <u>Gray</u> -        | 11 |
| <u>Orange</u> -      | 8  |
| <u>Dark-blue</u> -   | 6  |
| <u>Yellow</u> -      | 5  |
| <u>Purple</u> -      | 4  |
| <u>Green</u> -       | 4  |
| <u>Light-green</u> - | 3  |
| <u>Pink</u> -        | 2  |

# Selection of Winning Candidates



Candidate green is selected by lot not to be one of the seven winners. This is because candidate Purple also has 4 affirmed evaluations.

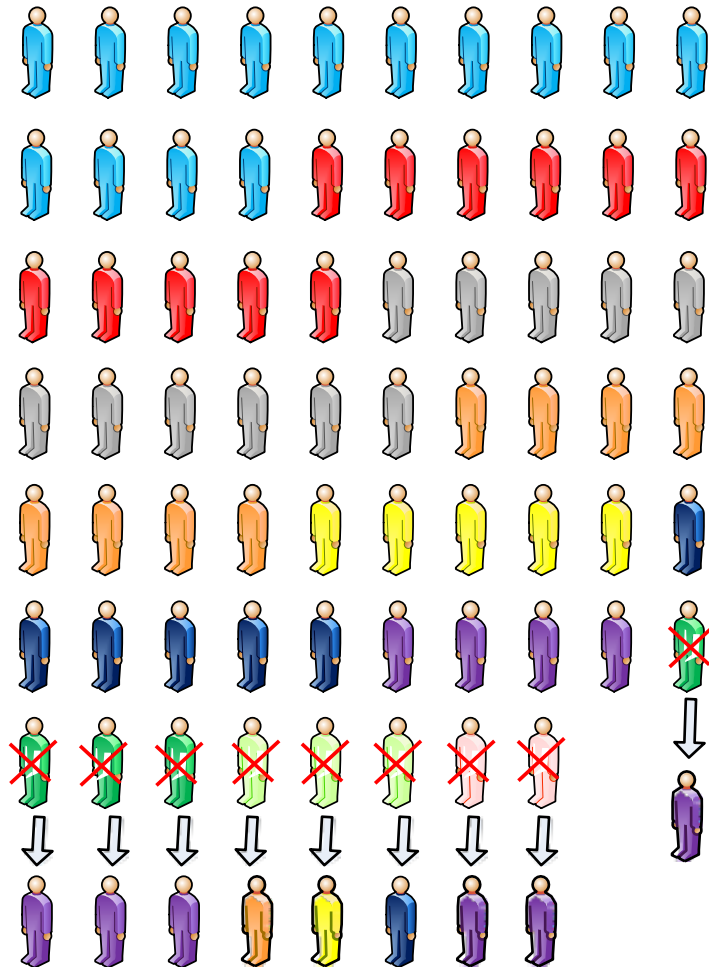
The seven candidates with the highest number of affirmed evaluations (votes) are elected. Candidates green, light-green and pink are eliminated.

|                               |    |
|-------------------------------|----|
| <u>Blue</u> -                 | 14 |
| <u>Red</u> -                  | 11 |
| <u>Gray</u> -                 | 11 |
| <u>Orange</u> -               | 8  |
| <u>Yellow</u> -               | 5  |
| <u>Dark-blue</u> -            | 6  |
| <u>Purple</u> -               | 4  |
| <del><u>Green</u></del> -     | 4  |
| <del><u>Light-green</u></del> | 3  |
| <del><u>Pink</u></del> -      | 2  |

The X's on the last nine color-coded voters refer to candidates that are not elected. Nonetheless, their votes will be counted for one of the seven elected candidates as shown in the following slide.



## Transfer of Votes to Winning Candidates

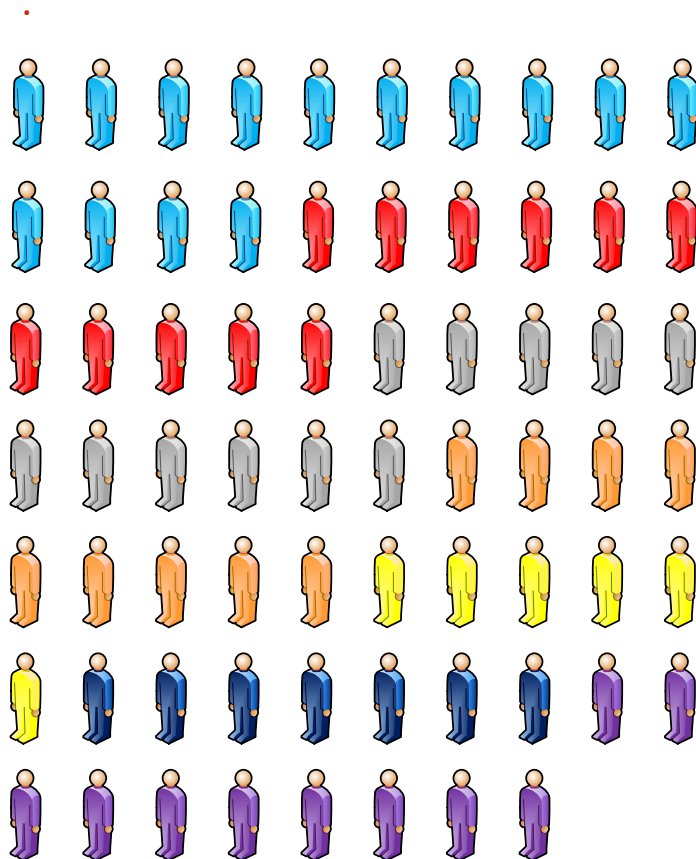


Evaluative Proportional Representation (EPR) guarantees that each citizen's vote will continue to count proportionately in the deliberations of the council.

Therefore, in this example, each of the affirmed evaluations currently held by the three unelected candidates must be transferred to one of the winners. Recall that the more citizens' votes a winner receives, the more voting power (more *weighted votes*) they will have in the council.

When possible, each citizen's vote for a non-winning candidate will be transferred to the winning candidate who has received the next highest grade on each relevant ballot. When no such grade is on the ballot, it is the voter's unelected candidate who must publicly transfer the voter's *proxy vote* to the winner whom they judge to be most *fit* for the office.

# Winning Candidates



As a result of the vote transfers shown on the previous page, the seven winning candidates, grouped by color, have the following *weighted votes* in the council:

|                    |    |
|--------------------|----|
| <u>Blue</u> -      | 14 |
| <u>Red</u> -       | 11 |
| <u>Gray</u> -      | 11 |
| <u>Orange</u> -    | 9  |
| <u>Yellow</u> -    | 6  |
| <u>Dark-blue</u> - | 7  |
| <u>Purple</u> -    | 10 |

As shown in this graphic illustration, and in contrast to all other voting methods, EPR gives every citizen every appropriate reason to be pleased: Their winning candidate in the council reflects their highest available grade and has voting power in the council that was proportionately increased by the citizen's one vote.

**Note:**

Email Steve for more information (stevebosworth@ hotmail.com): the detailed verbal description of EPR count (Appendix A), the R program that implements the EPR count (Appendix B), and the computer output for a simulated EPR election (Appendix C).