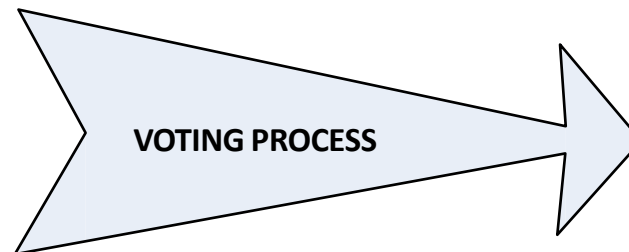


Evaluative Proportional Representation: A Figurative Explanation

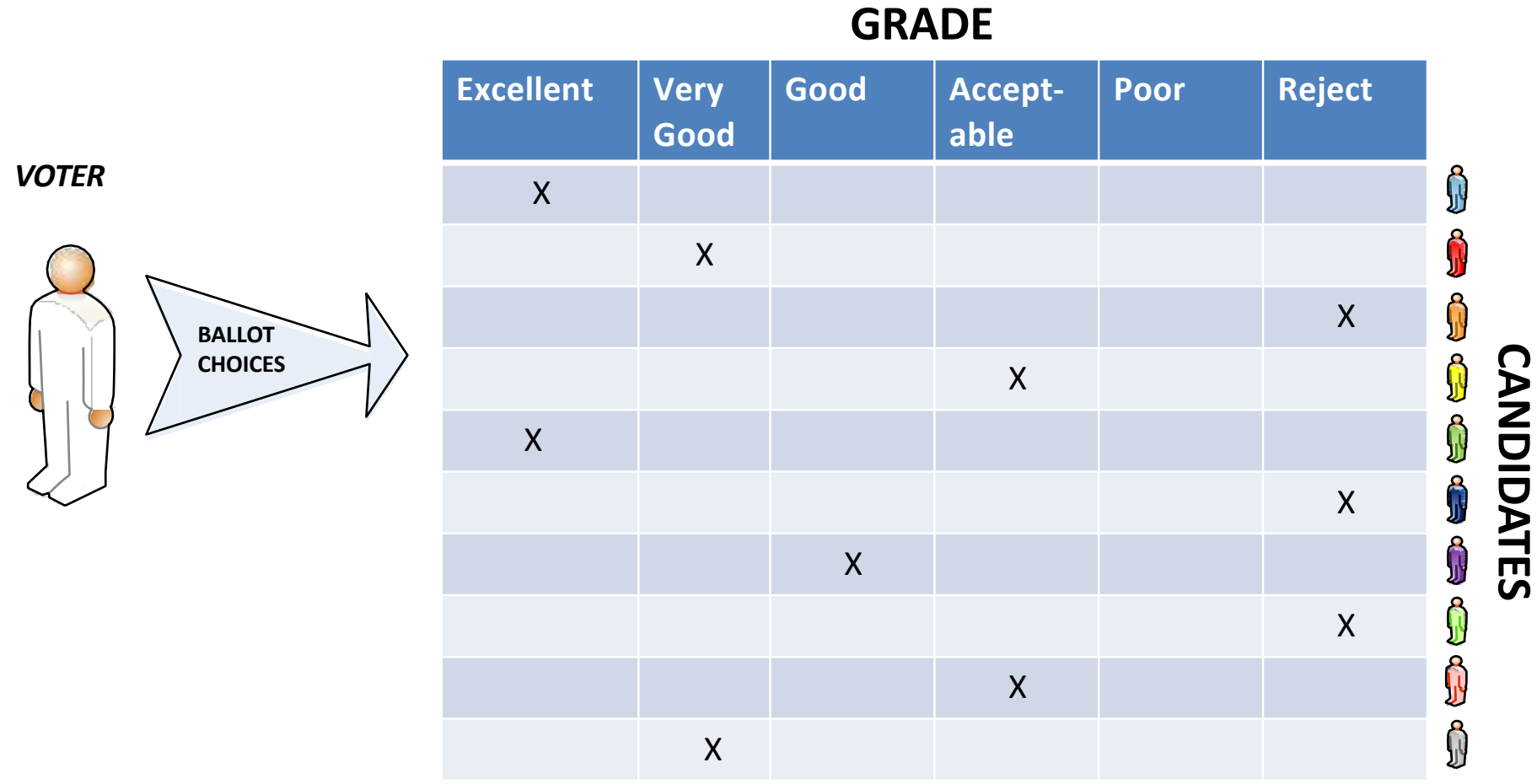
Unlike any existing voting method, Evaluative Proportional Representation (EPR) allows every citizen's vote to count proportionately in the legislative body such as a city council. These pages describe how EPR works.



CANDIDATES

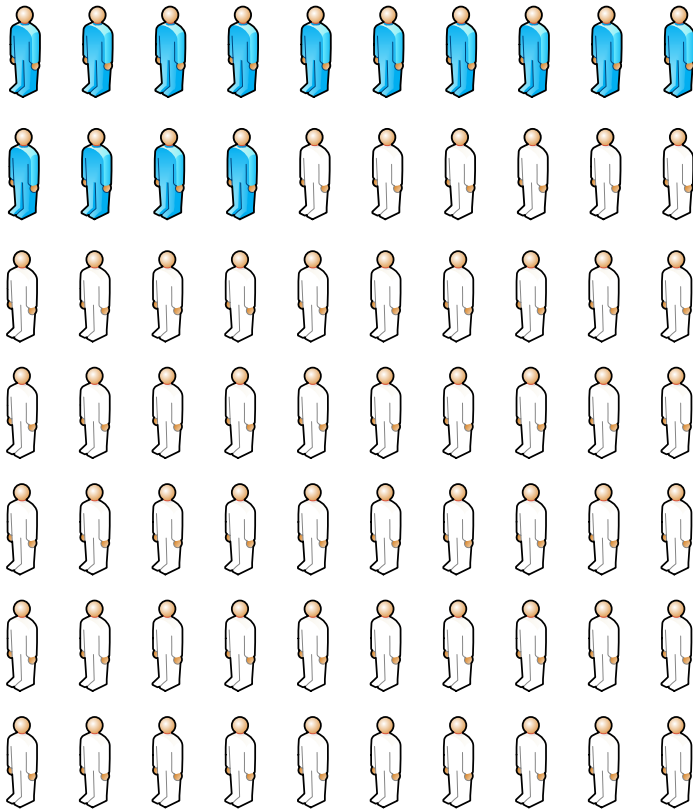
This illustration shows an electorate composed of 70 citizens. They elect the 7 council members from the 10 color-coded candidates. After assessing the ideal qualities needed by the office, citizens are invited to grade each candidate as either Excellent (*ideal*), Very Good, Good, Acceptable, Poor, or "Reject" (entirely unsuitable). Each of the seven winners has received one of the largest number of votes. These votes are composed of highest grades, remaining highest grades of at least Acceptable, or proxy votes from citizens. No citizen's vote is wasted.

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 use during the deliberations of 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

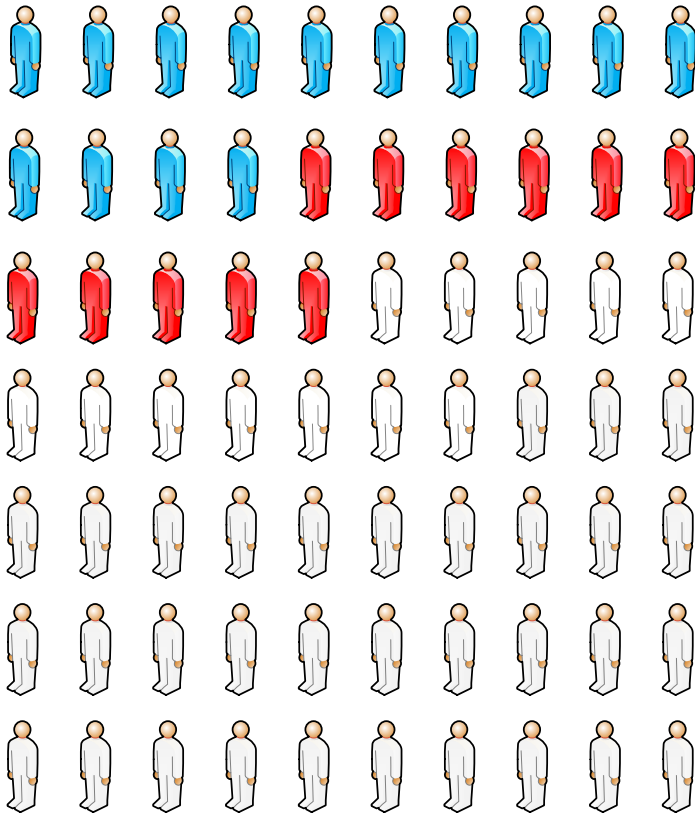


Each step of the vote count determines which votes are to be added to the candidates' running totals. If a voter gave "Excellent" to more than one candidate, this "Excellent" is added to the candidate who will have the highest running total at that stage of the count. So, only the candidate who acquires the largest number of the highest grades of at least Acceptable at each stage of the count provisionally retains those votes *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 that stage of the count. At the same time, in order to remove the anti-democratic possibility of a winner having received enough votes to dictate to the council, EPR limits the percent of all the votes a super-popular winner is allowed to retain.

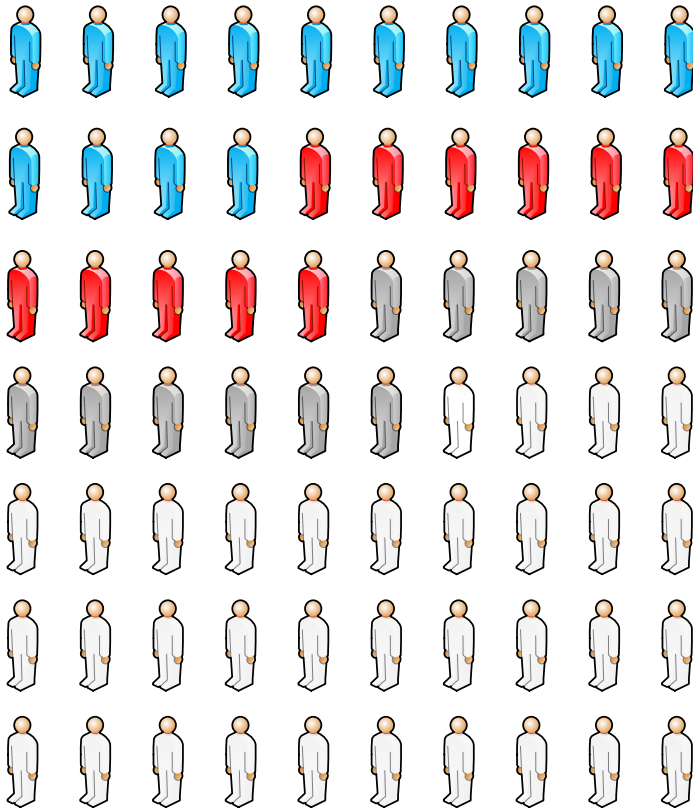
In this scenario, this means candidate **blue** has been allowed finally to retain only 14 out of the votes exclusively offered by the 70 citizens. This leaves 56 ballots to be counted.

Second Step of the Vote Count



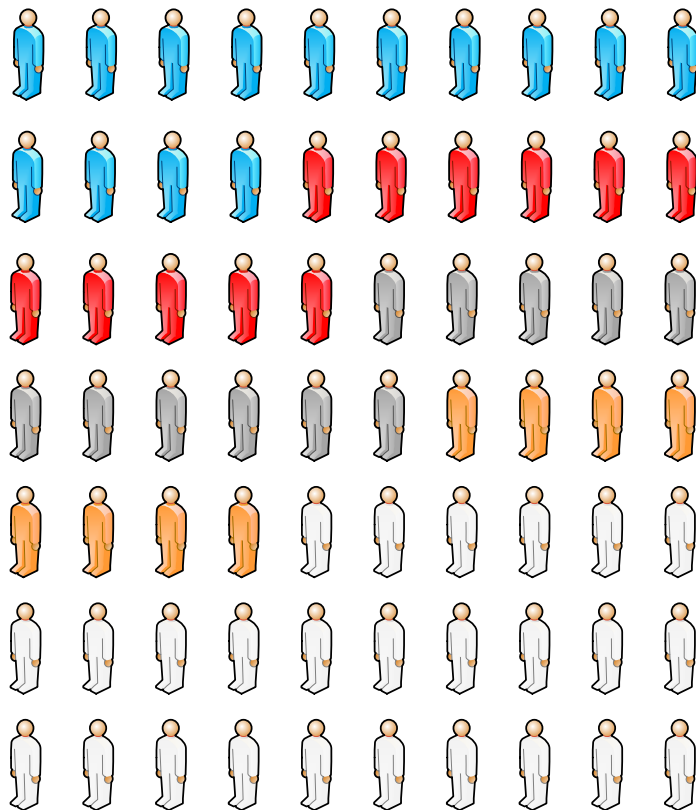
Similarly to the first step, the second step of the vote count determines that 11 highest grades of at least Acceptable from the remaining 56 ballots are given exclusively to candidate red. This leaves 45 ballots to be counted.

Third Step of the Vote Count



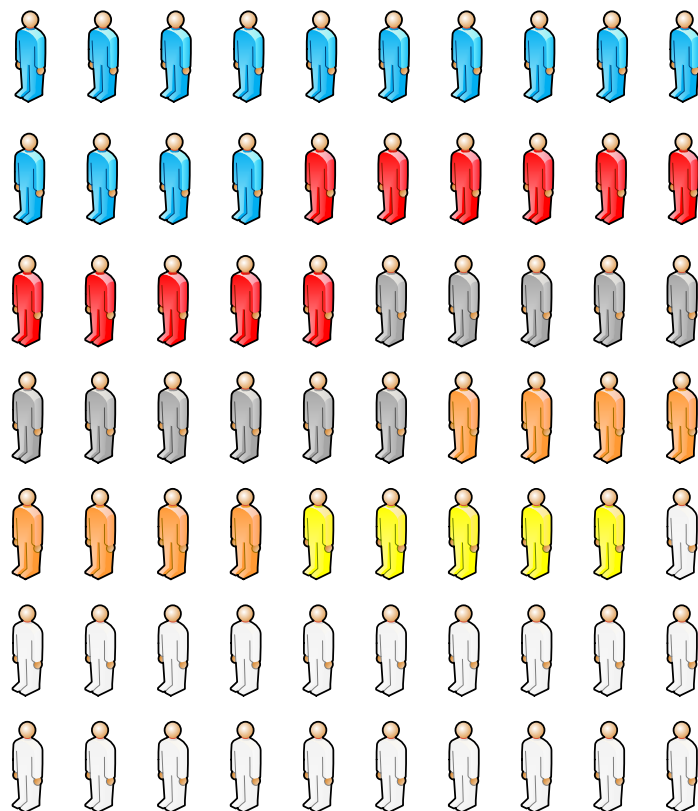
The third step of the vote count determines that 11 grades of at least Acceptable from the remaining 45 ballots are given exclusively to candidate gray. This leaves 34 ballots to be counted.

Fourth Step of the Vote Count



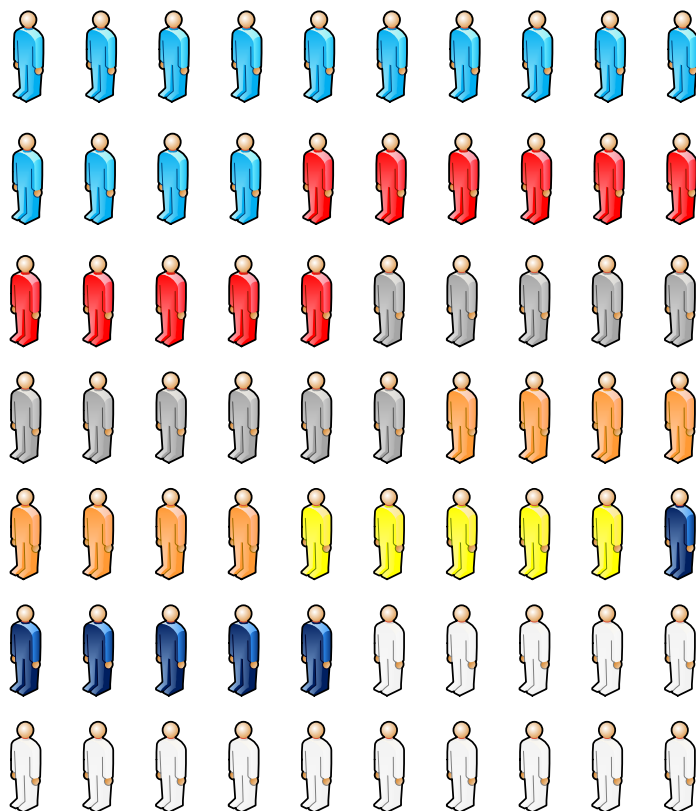
The fourth step of the vote count determines that 8 highest grades from the remaining 34 ballots are given exclusively to candidate orange. This leaves 26 ballots to be counted.

Fifth Step of the Vote Count



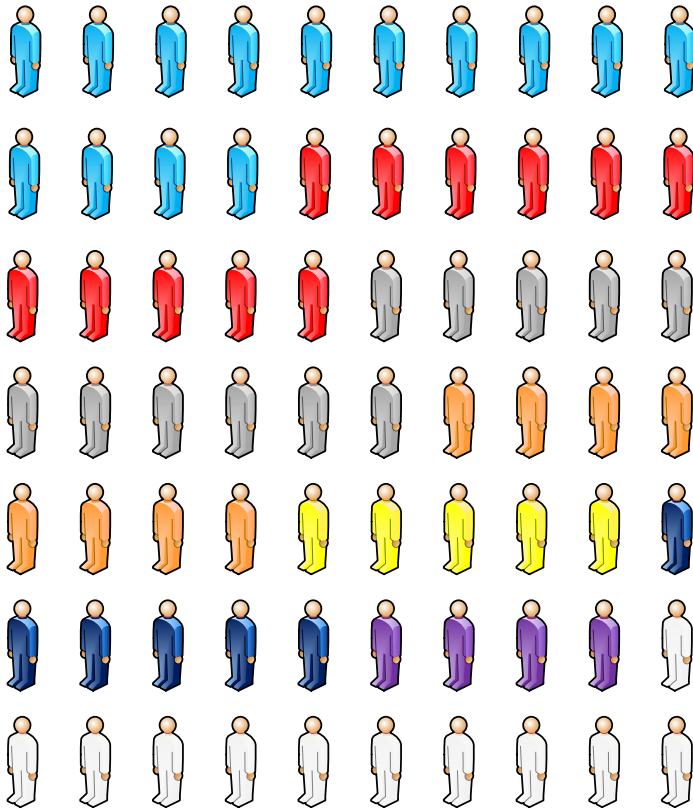
The fifth step of the vote count determines that 5 highest grades from the remaining 26 ballots are given exclusively to candidate yellow. This leaves 21 ballots to be counted.

Sixth Step of the Vote Count



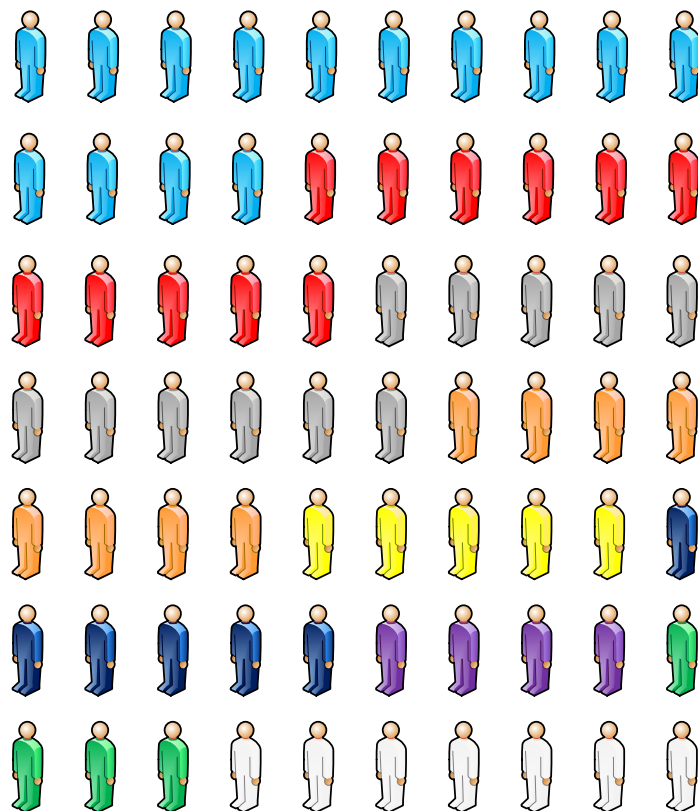
The sixth step of the vote count determines that 6 highest grades from the remaining 21 ballots are given exclusively to candidate **dark-blue**. This leaves 15 ballots to be counted.

Seventh Step of the Vote Count



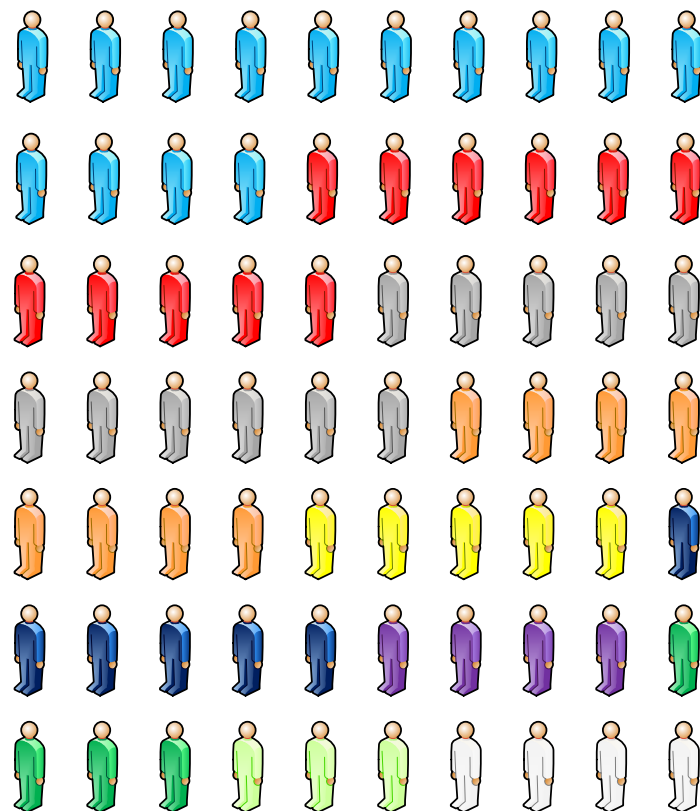
The seventh step of the vote count determines that 4 highest available grades from the remaining 15 ballots are given exclusively to candidate **purple**. This leaves 11 ballots to be counted.

Eighth Step of the Vote Count



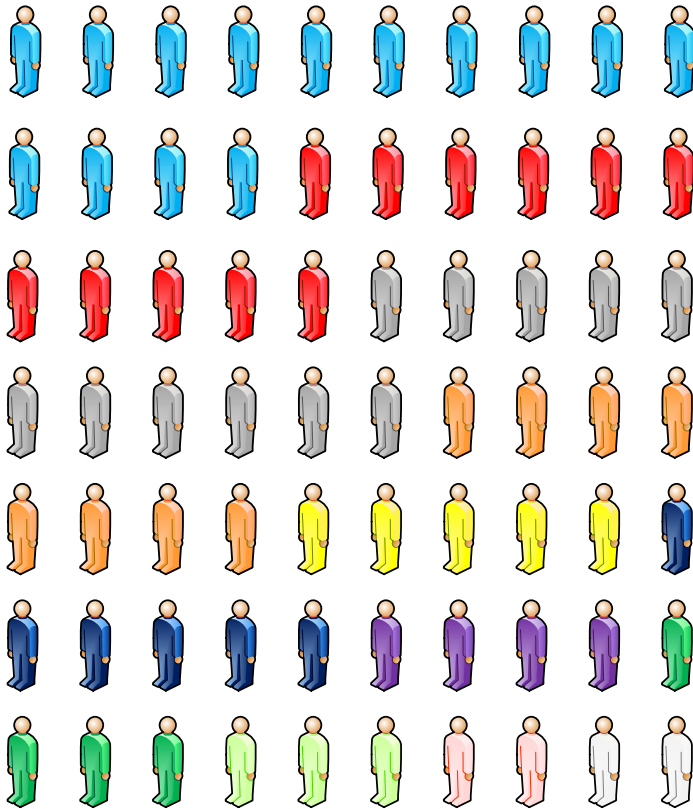
The eighth step of the vote count determines that 4 highest grades from the remaining 11 ballots are given exclusively to candidate green. This leaves 7 ballots to be counted.

Ninth Step of the Vote Count



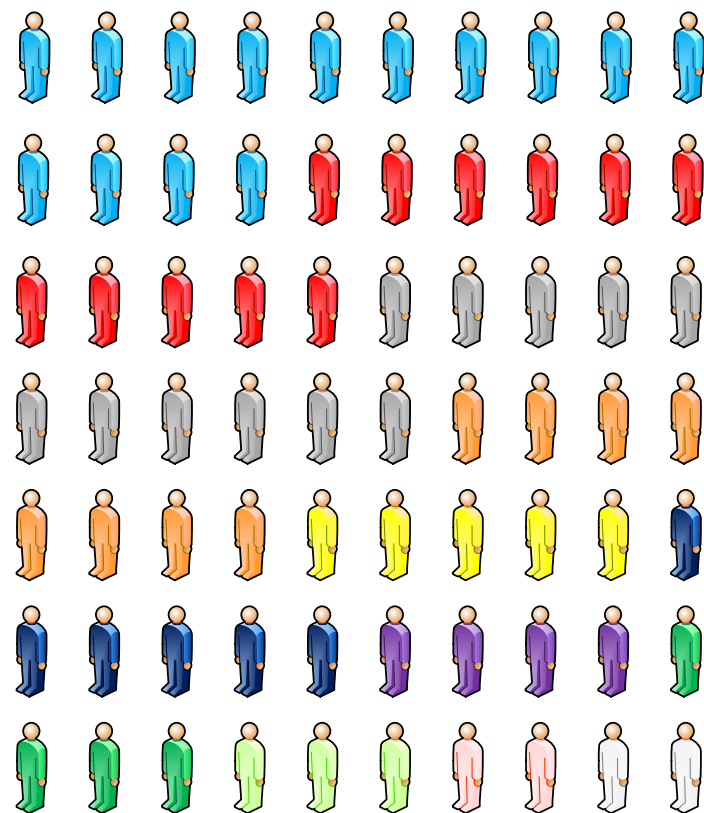
The ninth step of the vote count determines that 3 highest grades of the remaining 7 ballots are given exclusively to candidate light-green. This leaves 4 ballots to be counted.

Tenth Step of the Vote Count



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

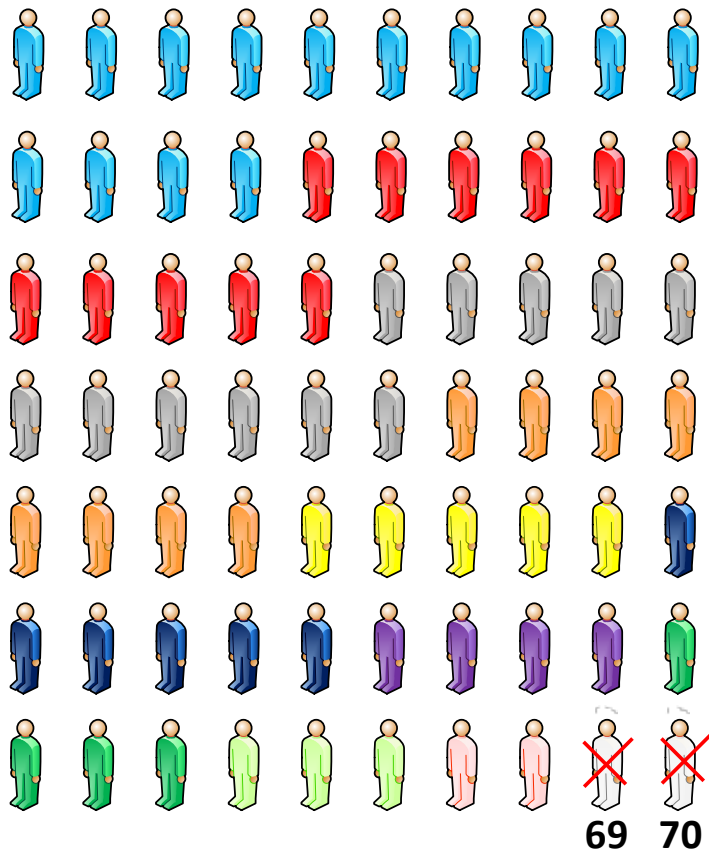
First through Tenth Steps of the Vote Count



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

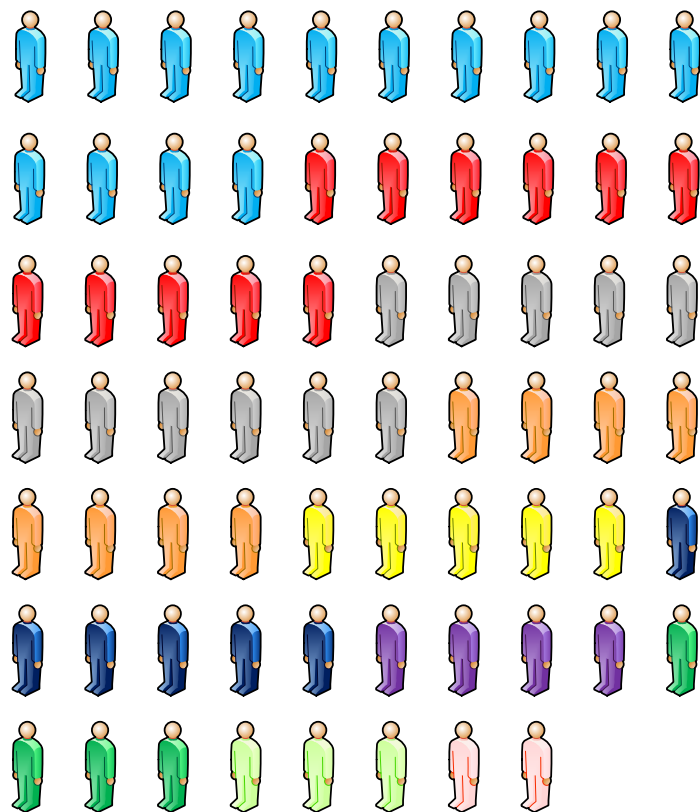
Step	Color	Votes
1	<u>Blue</u>	14
2	<u>Red</u>	11
3	<u>Gray</u>	11
4	<u>Orange</u>	8
5	<u>Yellow</u>	5
6	<u>Dark-blue</u>	6
7	<u>Purple</u>	4
8	<u>Green</u>	4
9	<u>Light-green</u>	3
10	<u>Pink</u>	2

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.

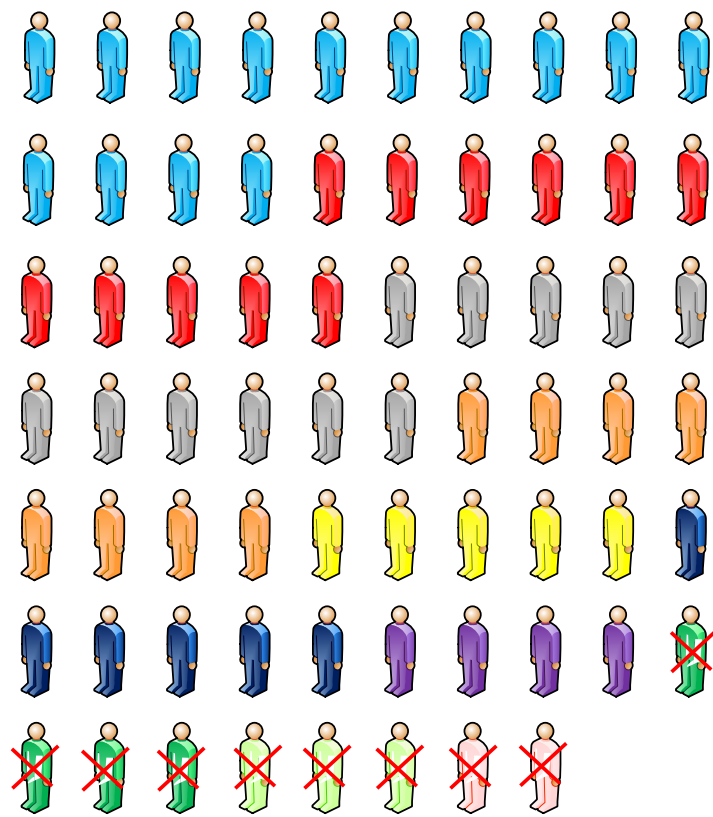
Order of the Candidates



The running totals for each of the ten candidates after completion of the vote counting 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

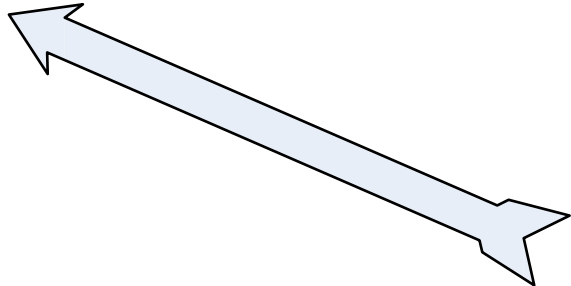
Selection of Winning Candidates



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

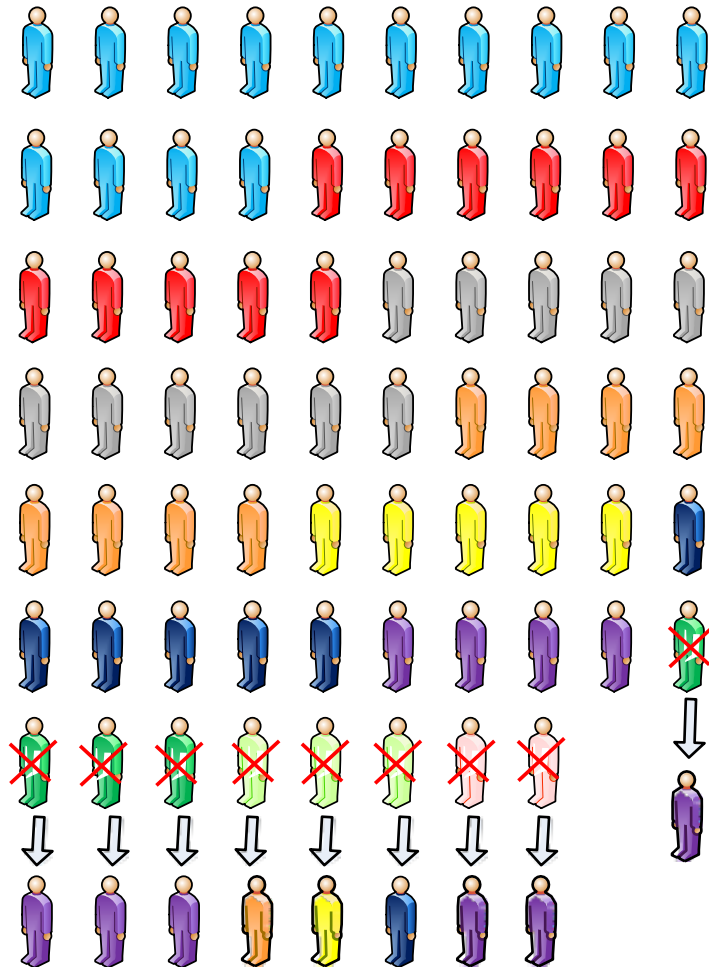
<u>Blue</u> -	14
<u>Red</u> -	11
<u>Gray</u> -	11
<u>Orange</u> -	8
<u>Yellow</u> -	5
<u>Dark-blue</u> -	6
<u>Purple</u> -	4
<u>Green</u> -	4
<u>Light-green</u>	3
<u>Pink</u> -	2

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 Xs 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

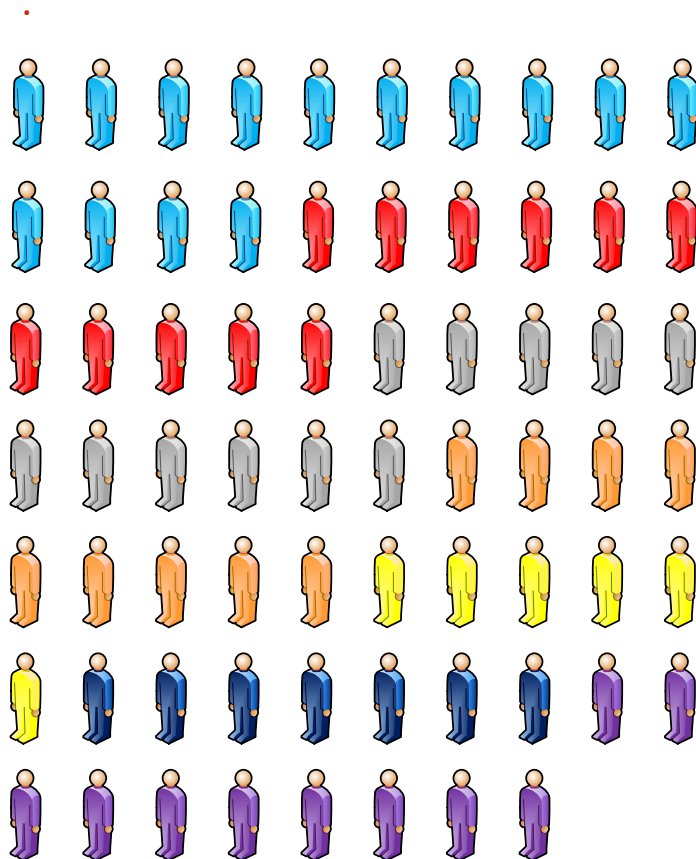


Evaluative Proportional Representation (EPR) guarantees that each citizen's vote will continue to count proportionately in the deliberations of the council.

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 a remaining highest grade on their 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 they judge most fit for the office. The same is true of any remaining extra ballot that requires a voter's proxy vote to be transferred to an eligible winner's running total by a super-popular winner.

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 grade, their remaining highest grade of at least Acceptable, or their proxy vote. Also, their winner has a voting power in the council that was proportionately increased by their one vote.

Note:

Email Steve for more information (stevebosworth@ hotmail.com). Also see these external references: [EPR Count: Detailed Description](#), EPR algorithm [EPRv2.r](#), and [Simulated Election Output from EPRv2.r](#).