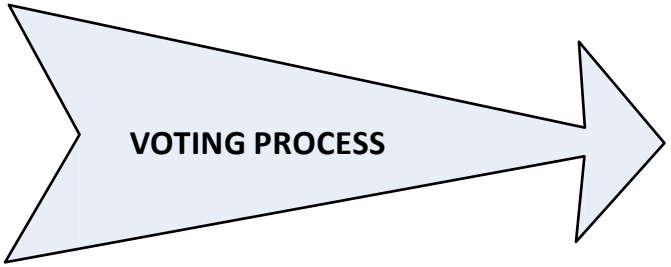
Evaluative Proportional Representation: A Figurative Illustration

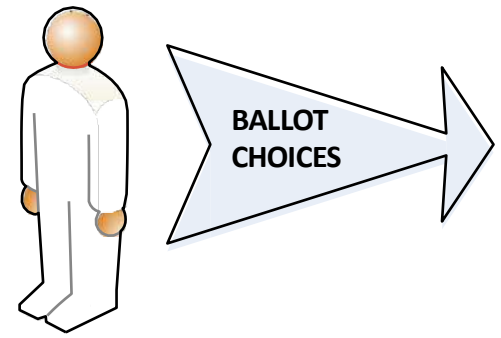
Unlike any existing voting method, Evaluative Proportional Representation (EPR) allows every citizen's vote to count proportionately in the legislative body such as a city council. These pages describe how EPR works.



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 7 winners has received one of the largest number of votes. These votes are composed of each citizen's highest grade, remaining highest grade, or proxy vote. No citizen's vote is needlessly wasted.

How the Voting Works



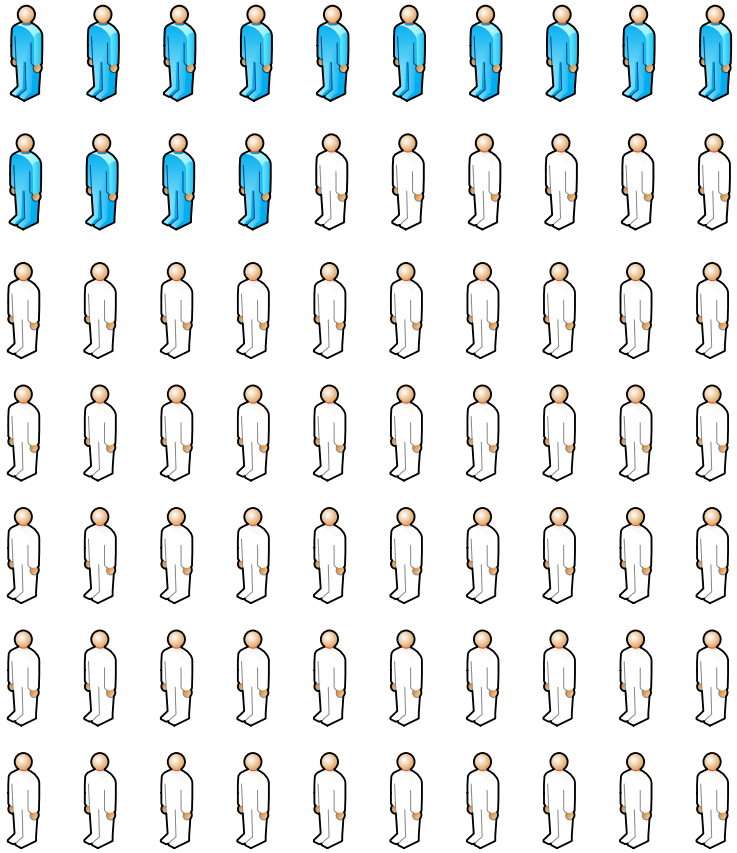
GRADE

Excellent	Very Good	Good	Accept-able	Poor	Reject
X					
	X				
					X
			X		
X					
					X
		X			
					X
			X		
	X				

CANDIDATES

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 largest running total at that stage of the count. So, only the candidate who acquires the largest number of votes at each step retains those votes *exclusively*.

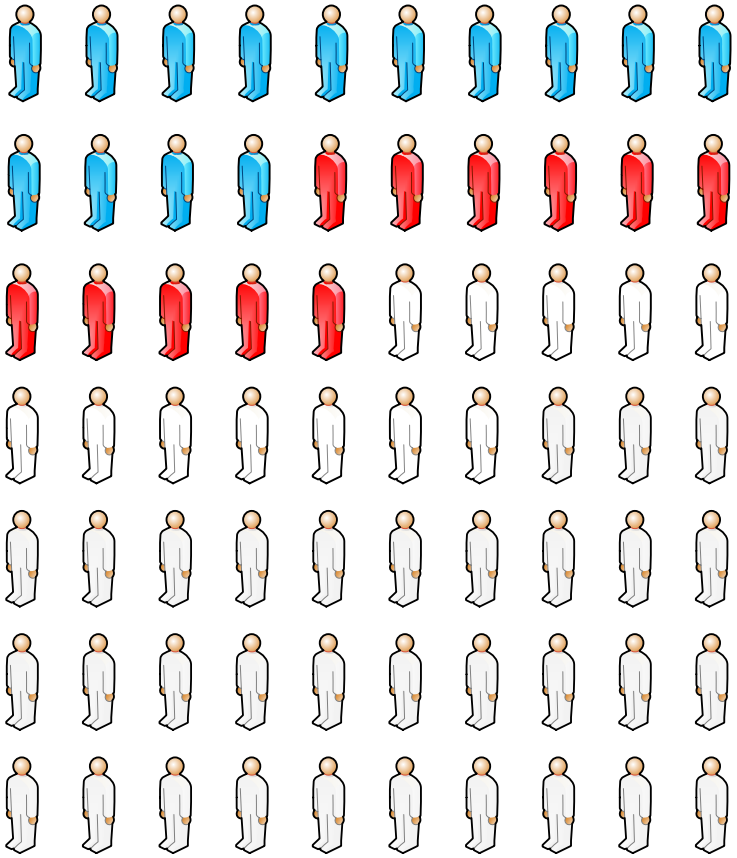
As a result of these vote allocations, all the grades awarded to other candidates by these voters' ballots are marked as "used" and removed from the rest of the count. This maintains the principle of *one citizen one vote.*

At the same time, in order to remove the possibility that one of the winners could be able to dictate to the council, EPR limits the percent of all the votes a super-popular winner can retain, which is 20% in this simulation example. This limitation is applied after all candidates have been selected in these initial steps.

At the end of this step, candidate **blue** has been found to retain 14 out of the 70 voters, exclusively.

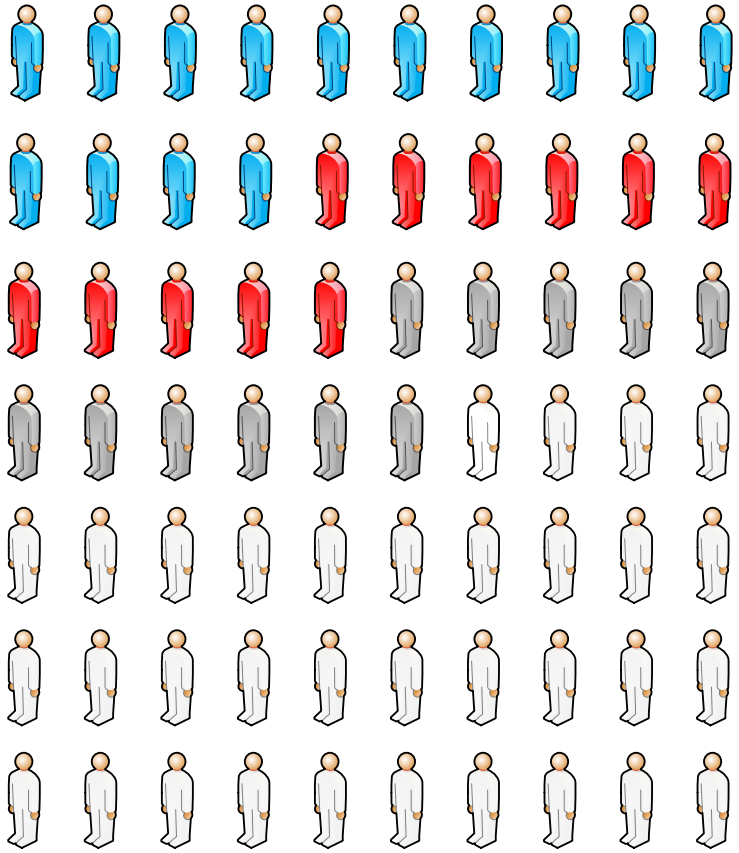
This leaves 56 ballots to be counted.

Second Step of the Vote Count



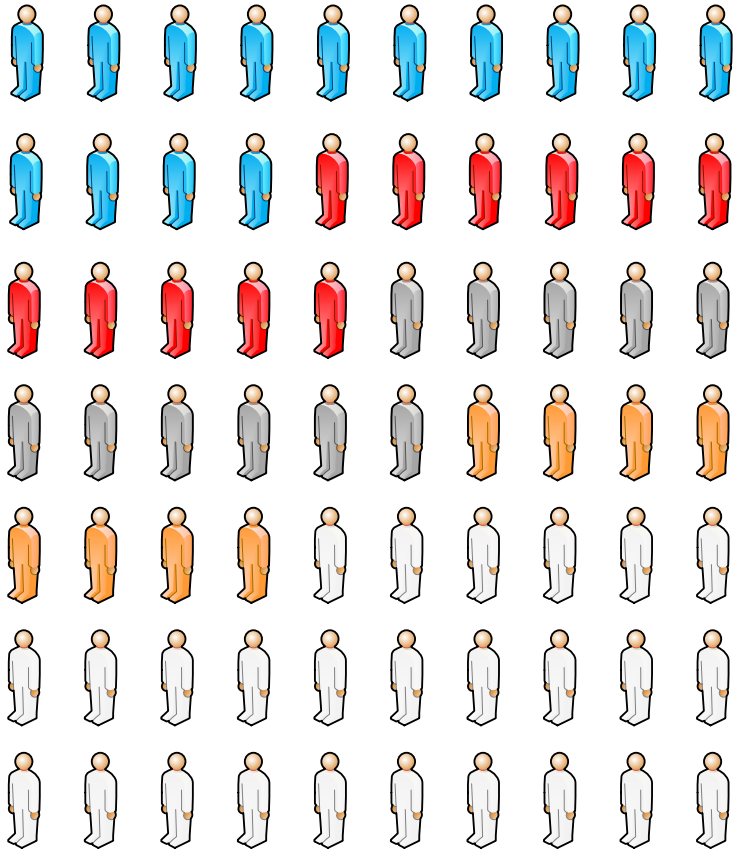
Similarly to the first step, the second step of the vote count determines that 11 highest grades from the remaining 56 ballots are given exclusively to candidate **red**. This leaves 45 ballots to be counted.

Third Step of the Vote Count



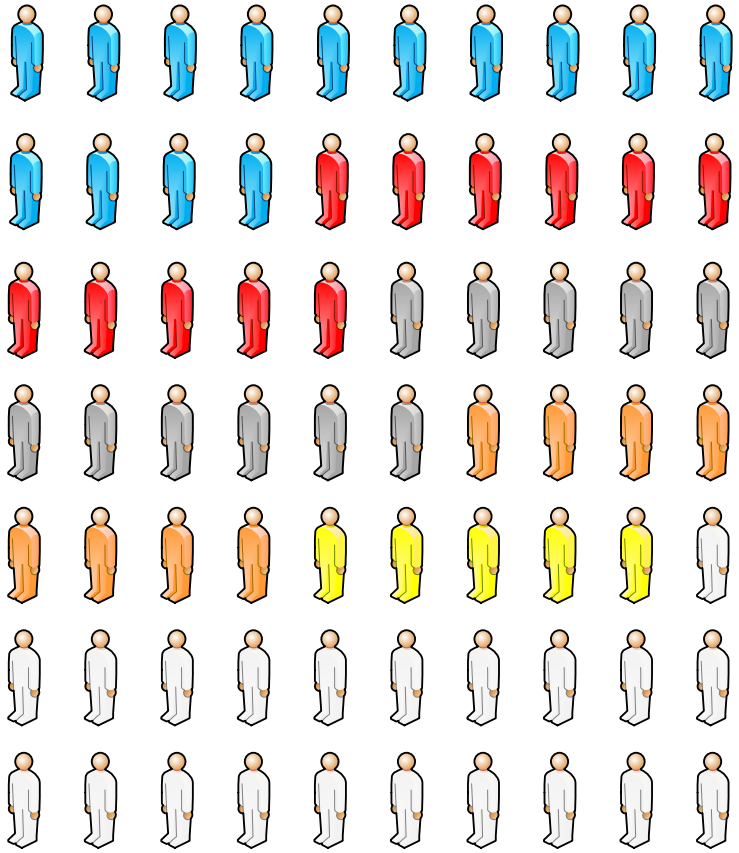
The third step of the vote count determines that 11 highest grades rom the remaining 45 ballots are given exclusively to candidate **gray**. This leaves 34 ballots to be counted.

Fourth Step of the Vote Count



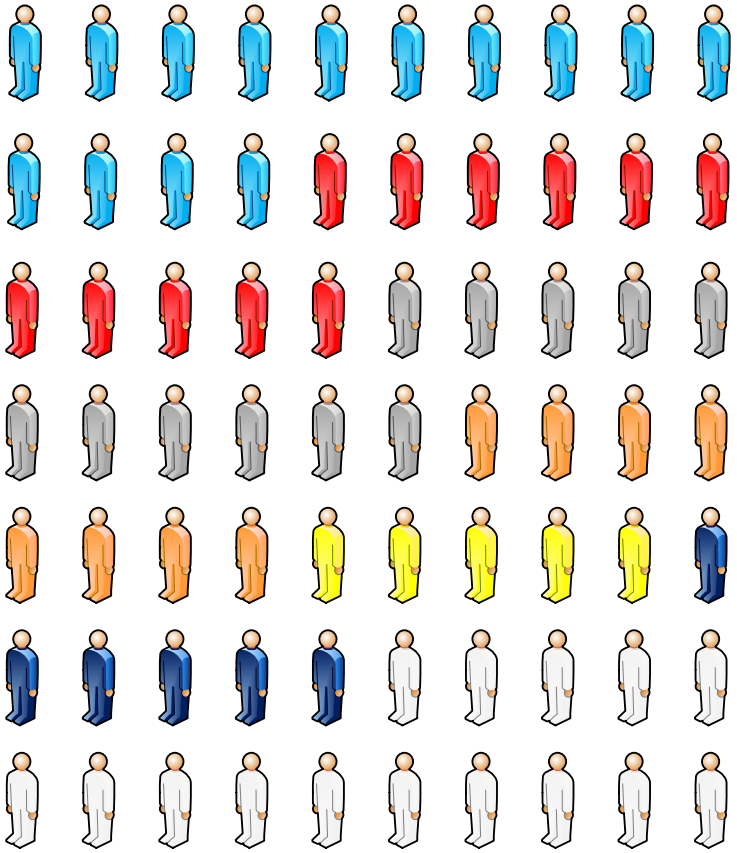
The fourth step of the vote count determines that 8 highest grades from the remaining 34 ballots are given exclusively to candidate **orange**. This leaves 26 ballots to be counted.

Fifth Step of the Vote Count



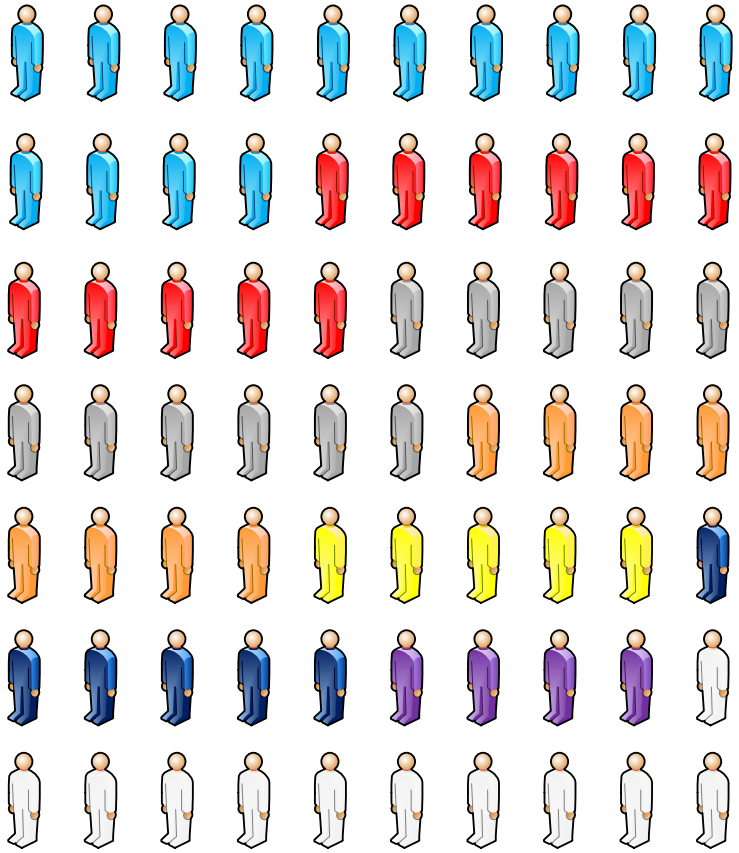
The fifth step of the vote count determines that 5 highest grades from the remaining 26 ballots are given exclusively to candidate **yellow**. This leaves 21 ballots to be counted.

Sixth Step of the Vote Count



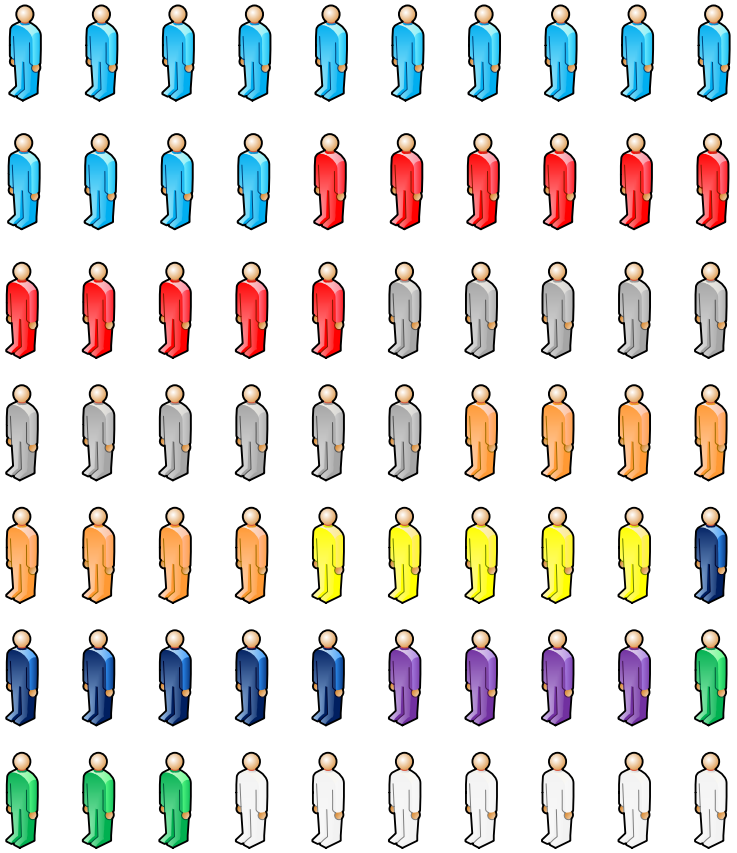
The sixth step of the vote count determines that 6 highest grades from the remaining 21 ballots are given exclusively to candidate **dark-blue** . This leaves 15 ballots to be counted.

Seventh Step of the Vote Count



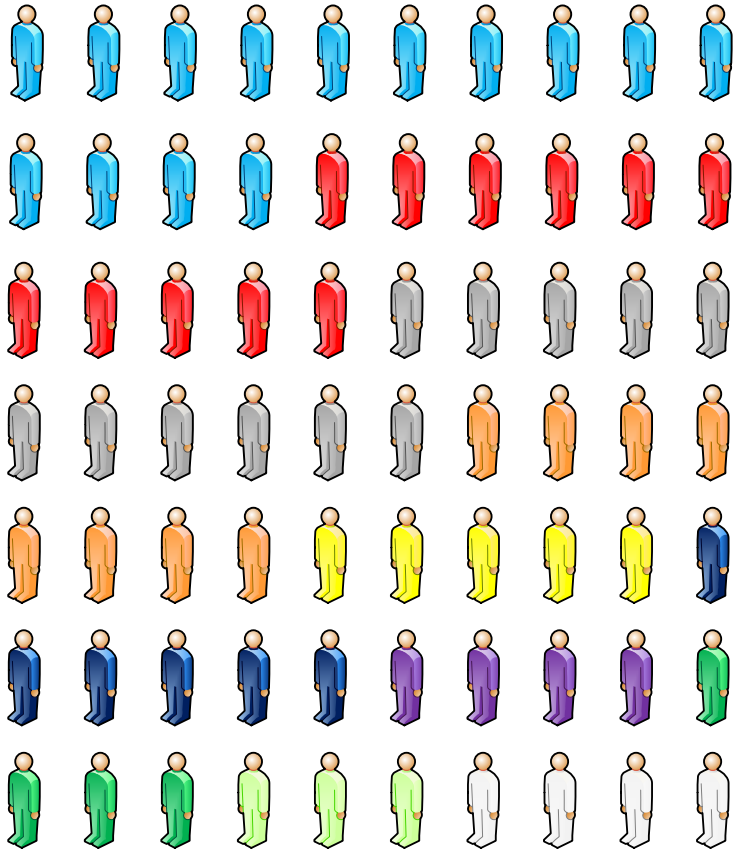
The seventh step of the vote count determines that 4 highest grades from the remaining 15 ballots are given exclusively to candidate **purple**. This leaves 11 ballots to be counted.

Eighth Step of the Vote Count



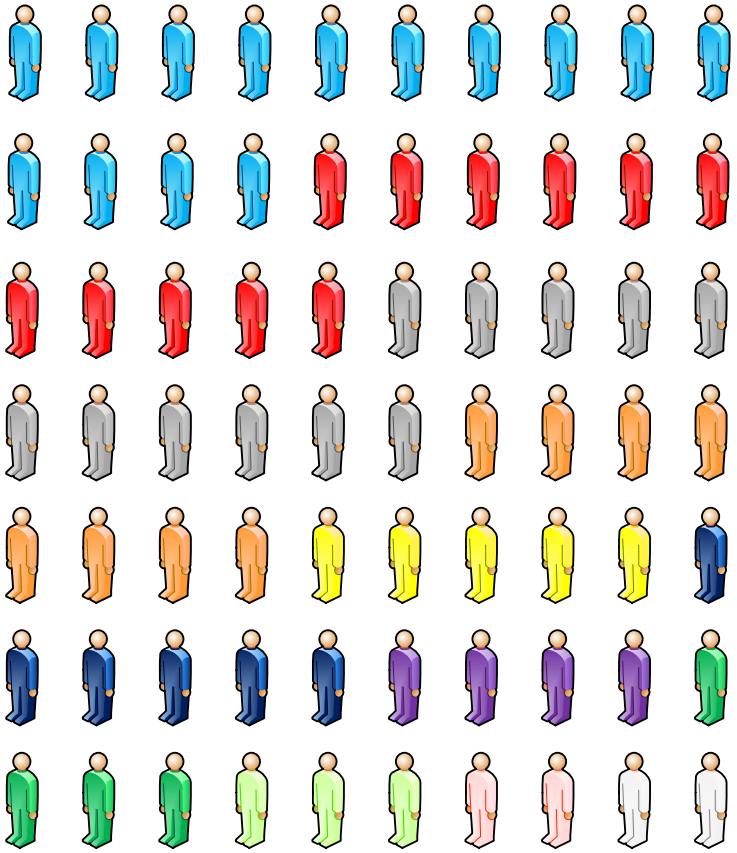
The eighth step of the vote count determines that 4 highest grades from the remaining 11 ballots are given exclusively to candidate **green**. This leaves 7 ballots to be counted.

Ninth Step of the Vote Count



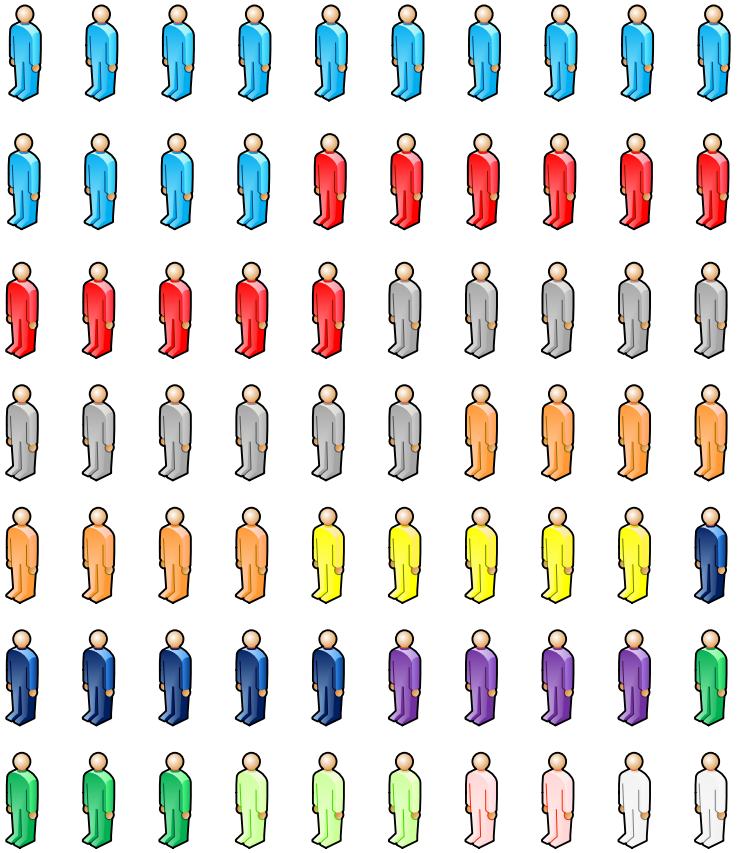
The ninth step of the vote count determines that 3 highest grades from the remaining 7 ballots are given exclusively to candidate **light-green**. This leaves 4 ballots to be counted.

Tenth Step of the Vote Count



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

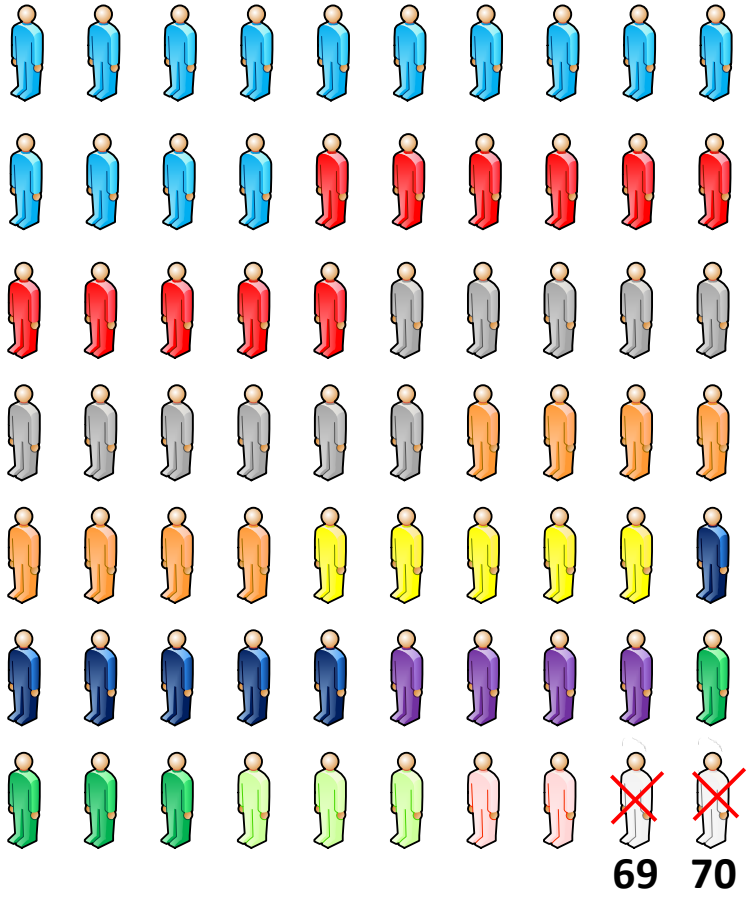
First through Tenth Steps of the Vote Count



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

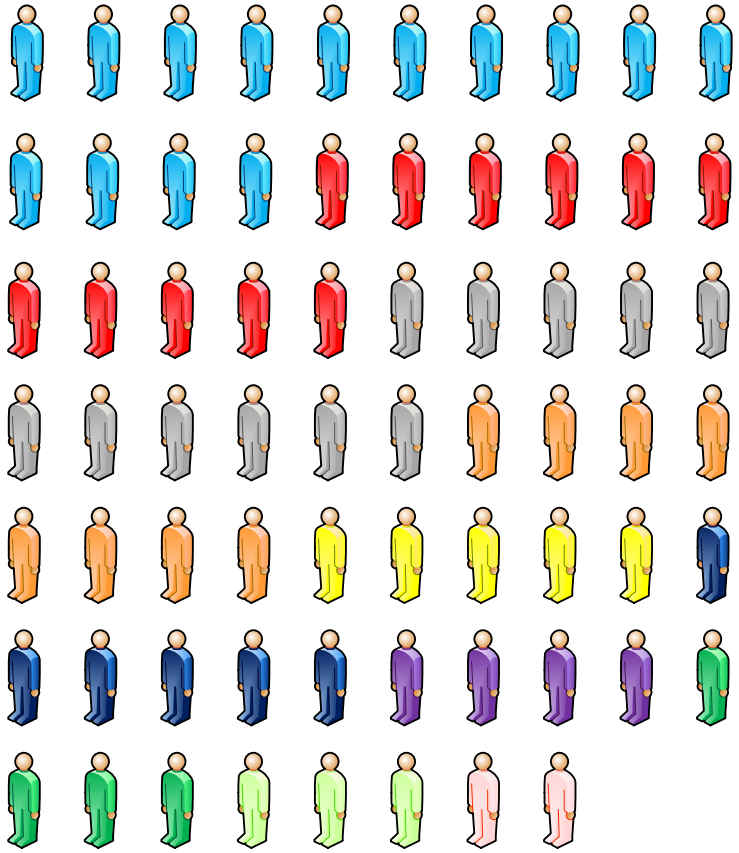
Step	Color	Votes
1	**Blue**	**14**
2	**Red**	**11**
3	**Gray**	**11**
4	**Orange**	**8**
5	**Yellow**	**5**
6	**Dark-blue**	**6**
7	**Purple**	**4**
8	**Green**	**4**
9	**Light-green**	**3**
10	**Pink**	**2**

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 the candidates. These two votes cannot be added to any candidate.

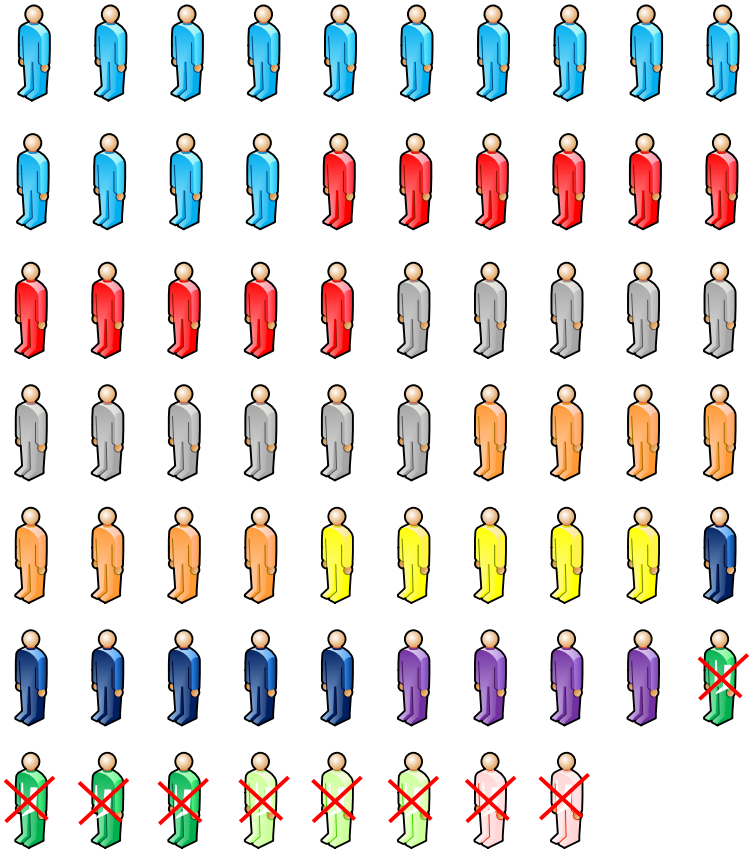
Order of the Candidates



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

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

Selection of Winning Candidates



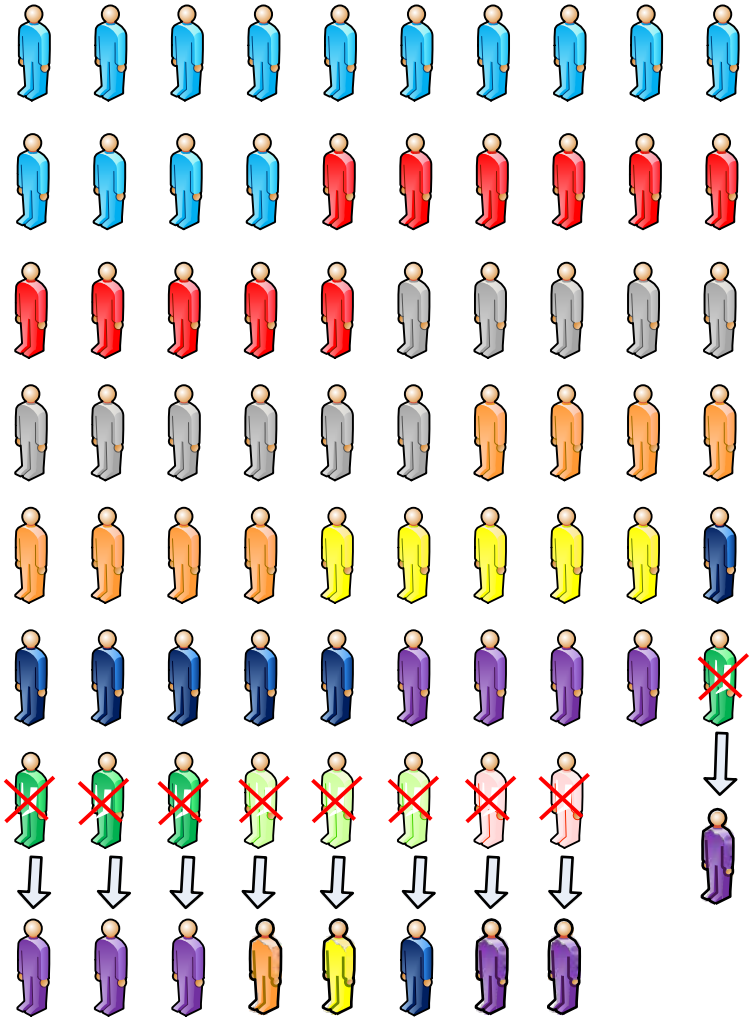
The seven candidates with the highest number of affirmed evaluations (votes) are elected. Candidates **green**, **light-green** and **pink** are eliminated.

Blue –	**14**
Red -	**11**
Gray -	**11**
Orange -	**8**
Yellow -	**5**
Dark-blue -	**6**
Purple -	**4**
Green -	**4**
Light-green	**3**
Pink -	**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. Therefore, the votes of these nine citizens will be counted for one of the seven elected candidates as shown in the following slide.

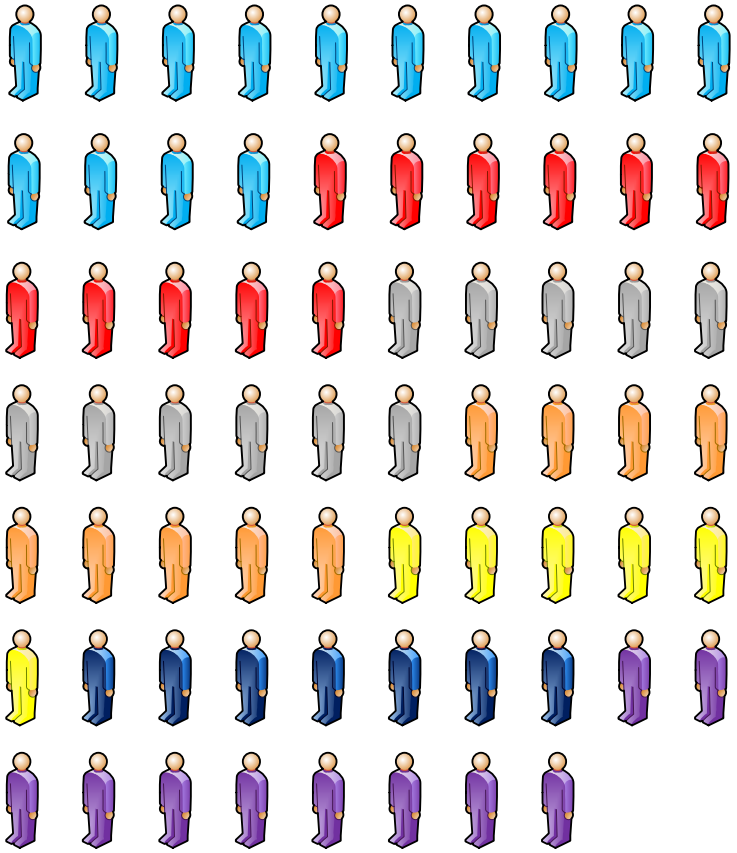
Transfer of Votes to Winning Candidates



Evaluative Proportional Representation (EPR) guarantees that each citizens' 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 remaining highest grade on the relevant citizen's ballot. When no such grade is on the ballot, it is the voter's super-popular candidate who must publicly transfer the voter's *proxy vote* to the winner they judge 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:

Blue -	**14**
Red -	**11**
Gray -	**11**
Orange -	**9**
Yellow -	**6**
Dark-blue -	**7**
Purple -	**10**

As shown in this illustration, and in contrast to all other voting methods, EPR gives every citizen every appropriate reason to be pleased: Each winning candidate in the council has received either a highest grade, a remaining highest grade, or a proxy vote from each of the citizens from whom they have received a 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.