I see there are two extremes that one could adopt to assign the number of points earned to a competitor for a given competition. One is the system currently in place, which favors giving lots of points to 6th place at big games, is seen here, where # is the number of competitors and p is the placing (1^{st}-6^{th}):

$$\# - (p-1) \text{ ------------------- (Eq. 1)}$$

The other extreme proposed by others, is the 6 point scale, 1^{st}=6, 2^{nd}=5, 3^{rd}=4, 4^{th}=3, 5^{th}=2, 6^{th}=1, regardless of how many compete. A modified form is given below that accounts for the number of competitors. Notice that 1st place always gets 6 points, no matter how many people compete. This favors giving points to people who go to smaller games (which is certainly good for competition attendance at the smaller games). My modification below basically makes it similar to Eq. 1, just bounded by the number 6, instead of the number of competitors #. For example, out of 10 competitors, Eq. 1 gives 1st=10, 6th=5; whereas the modified formula below would give 1st=6, 6th=3; whereas a flat 6 point rule would give 1st=6, 6th=1.

$$\frac{6*(\# - (p-1))}{\#} \text{ ------------------- (Eq. 2)}$$

My original formula given on the forums at bobdunsire.com is based on the fact that 6th place should receive (1/6) the number of points as 1st place. The formula is:

$$\# * \left(\frac{1}{p}\right) \text{ ------------------- (Eq. 3)}$$

However, this can lead to lower than desired points for the lower places, and in general of all the formula I present here, gives the lowest number of possible points of all the formulae for the lower places. A modified form of Eq. 3 gives Eq. 1 points to 1^{st} and Eq. 2 points to 6^{th} place and intermediary values in between (it's a little cumbersome):

$$\# * \left(\frac{1}{p}\right)^{\left(\frac{1}{x}\right)} \text{ ------------------- (Eq. 4)}$$

$$\text{where } x = \frac{\log\left(\frac{1}{6}\right)}{\log\left(\frac{6*(\# - 5)}{\#^2}\right)}$$

Disregarding my non-linear formulae for the moment, another formula that is more like the current rule (Eq. 1) but has a steeper slope is as follows:

$$\# * \#^{-\left(\frac{p-1}{\#}\right)} \text{ ------------------- (Eq. 5)}$$

The above formula (Eq. 5) guarantees the 1st place winner gets the number of points as there are competitors (as do all the formula mentioned so far), but makes 6th place get less than (# - 5) points, which is the number of points 6th place would get using Eq. 1, the current formula. So the number of points decreases faster than the currently used Eq. 1, but is not as drastic as Eq. 3.

The last formula I propose amounts to about an average between Eq. 1 and Eq. 3 and is a modified form of Eq. 5:

$$\#^{y} * \#^{-\left(\frac{p-1}{\#}\right)} \text{ ------------------- (Eq. 6)}$$

$$\text{where } y = \frac{\left(\frac{\log\left(\frac{6*(\#-5)}{\# * \#^{-\frac{5}{\#}}}\right)}{\log(\#)}\right) + 1}{2}$$

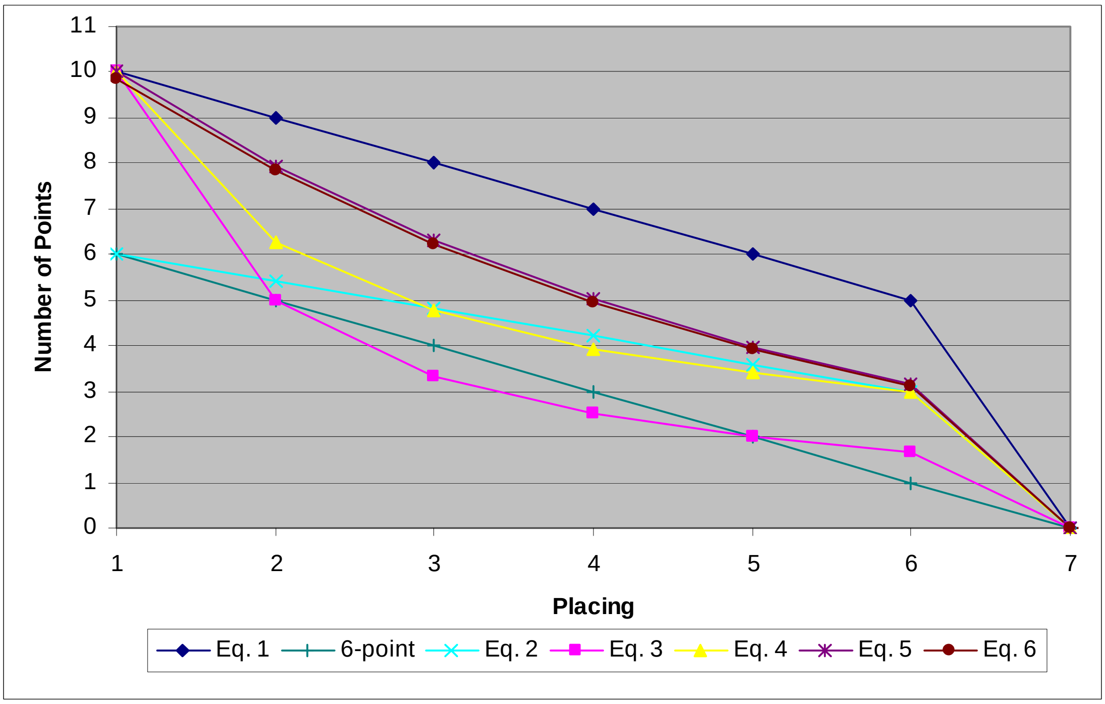
where y is sort of arbitrary but I find it works well (simply an average of two extreme cases).

Thus, in my mind, Eq. 4 and Eq. 6 are the best. Except they both have one problem. You cannot calculate their values for competitions of fewer than 6 people. This is easily resolved by substituting the simpler forms, Eq. 3 for Eq. 4 and Eq. 5 for Eq. 6 for # < 6.

By adopting a new formula with a steeper slope, be it Eq. 3, 4, 5, or 6, gives incentive to travel to the smaller games. Why? Because the points competitors earn in the lower placings at the larger games don't amount to as much with the new formulas. The current formula, Eq. 1, gives a lot of points to lower placing at larger games which completely overshadows the points earned at smaller games. The relative difference in the number of points earned at the smaller games (whether you got 1st or 6th) isn't going to be very much simply because of the number of competitors, regardless of the point system used, because they are pretty much all based on the number of competitors. However, if you change how many points the lower placings get in the big competitions, you lend more weight to those points earned at the smaller games.

Though I 'admire' my original formula for its elegance, the more complicated formulas I derived above may more accepting of the membership at large because of their linearity (for the most part).

Below is a graph for a competition of 10 competitors (a rough estimate of the average number of competitors per competition), and the number of points each place would get based on each of the 7 point systems described above.



Eq. 1 – Currently in use by EUSPBA
Eq. 2 – Modified 6-point
Eq. 3 – McLaurin Original
Eq. 4 – Modified McLaurin
Eq. 5 – McLaurin2
Eq. 6 – Modified McLaurin2

The differences between Eq. 5 and 6 manifest themselves at greater number of competitors.

Lastly, there is a simple modification of the current formula, Eq. 1. That modification is, the number of points cannot exceed the number 6. So...

if # = 1, 1^{st} = 1;
if # = 2, 1^{st} = 2, 2^{nd} = 1;
if # = 3, 1^{st} = 3, 2^{nd} = 2, 3^{rd} = 1;
if # = 4, 1^{st} = 4, 2^{nd} = 3, 3^{rd} = 2, 4^{th} = 1;
if # = 5, 1^{st} = 5, 2^{nd} = 4, 3^{rd} = 3, 4^{th} = 2, 5^{th} = 1;
if # = 6, 1^{st} = 6, 2^{nd} = 5, 3^{rd} = 4, 4^{th} = 3, 5^{th} = 2, 6^{th}=1;
if # = 7, 1^{st} = 6, 2^{nd} = 5, 3^{rd} = 4, 4^{th} = 3, 5^{th} = 2, 6^{th}=1;
if # = 20, 1^{st} = 6, 2^{nd} = 5, 3^{rd} = 4, 4^{th} = 3, 5^{th} = 2, 6^{th}=1.

This formula would certainly encourage others to attend the smaller games as they wouldn't have to beat as many people to get points. I think this formula is too biased toward the smaller games; it is no small feat to beat 16 people in competition and it should be rewarded accordingly.