Some Alternate Resolution Mechanics for AGE

A number of alternate resolution mechanics for the Adventure Game Engine are detailed below. These alternate methods replace the 3d6 bell curve with a d20 flat probability while still generating stunt points.

Method I

Instead of rolling 3d6, roll one d20 and one d12. The d20 will give you the roll result. If the roll result is successful, the number of stunt points (SP) received is equal to the d12 result minus 6 (minimum of zero).

If a roll uses the result of the stunt die regardless of whether the roll is successful or not, simply divide the d12 result by 2 and round up (you're essentially using the d12 to simulate a d6).

This method gives an equal chance of getting a result between 1 and 20, keeps the mean number rolled at 10.5, and standardizes the percentage of getting stunt points at 50% and the mean number of stunt points at 3.5 gained regardless of the target number.

Method II

If you don't have a d12, you can roll one d20 and two d6, each with a different color or size. One d6 is used to see if stunt points are generated on a success while the other d6 shows the number of stunt points. The d20 gives the roll result. If the roll was a success and the first d6 shows a 4, 5, or 6, then a number of stunt points are generated equal to the result on the second d6. If the first d6 shows a 1, 2, or 3 then no stunt points were generated for this success.

If a roll uses the result of the stunt die regardless of whether the roll is successful or not, simply use the second d6.

The disadvantage of this method is that you may have to keep a close eye on which d6 a player is using for which determination.

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How Do These Methods Compare to the Default?

Overall, there is a 44.44% chance of getting doubles when considering all values and combinations that can be obtained using 3d6 (*Fantasy AGE Campaign Builder's Guide*, page 4). The mean value on the stunt die is 3.5.

The table below shows the chance of generating stunt points for a given target number and the mean number of SP generated for the target number. For example, if the target number is 9, a roll of 9 to 18 would indicate success. For rolls of 9 through 18, there is a 40% chance of getting doubles (and,

thus, generating stunt points). Given all dice combinations that will generate doubles for all results from 9 to 18, the mean number of stunt points is 4.19.

As another example, consider TN 18. Only a result of 18 on 3d6 will generate a success. This requires all three dice to show 6. Because of this, the mean number of SP generated will be 6 (since the stunt die will always show a 6 if an 18 is rolled). For TN 17, there are four possibilities. One possibility is an 18 while the other three are 17's with two dice showing 6 and one 5. This means that the stunt die for the three 17's would show 6 two of the times and 5 the other. This average is 6+6+6+5 divided by four, which is 5.75. Similar methods are used to calculate the rest of the table.

STUNT POINT PERCENTAGES AND MEANS				
Target Number	Successful Roll	Chance of Success	Chance of Doubles	Mean SP
3	3 to 18	100.00 %	44.44 %	3.50
4	4 to 18	99.54 %	44.19 %	3.53
5	5 to 18	98.15 %	43.40 %	3.60
6	6 to 18	95.37 %	41.75 %	3.73
7	7 to 18	90.74 %	41.84 %	3.82
8	8 to 18	83.80 %	40.33 %	4.00
9	9 to 18	74.07 %	40.00 %	4.19
10	10 to 18	62.50 %	42.22 %	4.33
11	11 to 18	50.00 %	44.44 %	4.52
12	12 to 18	37.50 %	48.15 %	4.72
13	13 to 18	25.93 %	57.14 %	4.88
14	14 to 18	16.20 %	65.71 %	5.09
15	15 to 18	9.26 %	70.00 %	5.36
16	16 to 18	4.63 %	100.00 %	5.50
17	17 & 18	1.85 %	100.00 %	5.75
18	18	0.46 %	100.00 %	6.00

The overall mean number of stunt points generated (when they are generated) across all target numbers is about 4.53. The mean number of stunt points generated for all rolls (including non-double rolls) is about 2.78. The overall mean chance of doubles across all target numbers is 57.73% (essentially, an average of the fourth column above). If you only consider target numbers from 7 to 15, then this mean is 49.98% (about half of the time). It could be argued that most TN fall from 7 to 15 in AGE games, so the mean chance of getting doubles for the normal range of TN is 50%.

The alternate methods presented generate stunt points exactly 50% of the time. Although the mean number of stunt points generated in the alternate methods are almost exactly one less than the normal 3d6 method (3.5 versus 4.5) there is a higher percentage chance of generating stunt points when target numbers range from 3 to 12 (50% versus 40% to 48.15%). These differences seem acceptable if the gaming group wants to have the flat probability of using a d20 for ability tests.