

Introduction

A good roleplaying dice system should satisfy several criteria. The two most important ones are that it should be reasonably easy to use and it should be reasonably realistic, or at least have a simulacrum of realism.

To define „realism“ in game-mechanical terms is fairly difficult, but a baseline can be summed up as:

- * higher skill should always lead to higher success chances
- * higher difficulty should always lead to lower success chances
- * higher skill should lead to more reliable results (higher consistency of results, less spread)

To define „ease of use“ is easier, though it depends on a combination of factors:

- * how many dice are handled?
- * how many and which operations are done with them?

Especially the last factor is well researched and we know that comparison is the easiest operation, followed by addition.

Following these guidelines, I have compared dice systems before, and found all of them lacking. That is not to say all dice systems I checked were equally bad - there are good and bad, just nothing that satisfied all criteria.

Until now.

Well, that was ab it dramatic. It turns out that I missed a very simple system that I am sure is used by many games, though the only one where I found it spelled out like this is Dragon Brigade. With a few minor modifications, we have this:

- * players roll 2-10 dice, based on their skill or whatever.
- * the GM sets a difficulty level
- * players sum up only the two highest dice rolled and compare it to the difficulty level to determine success or failure
- * for opposed tests, instead compare the result of the two opponents directly
- * add various tweaks and complications as you like

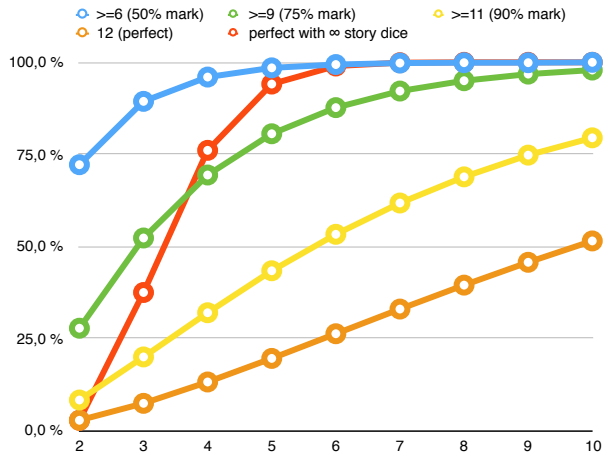
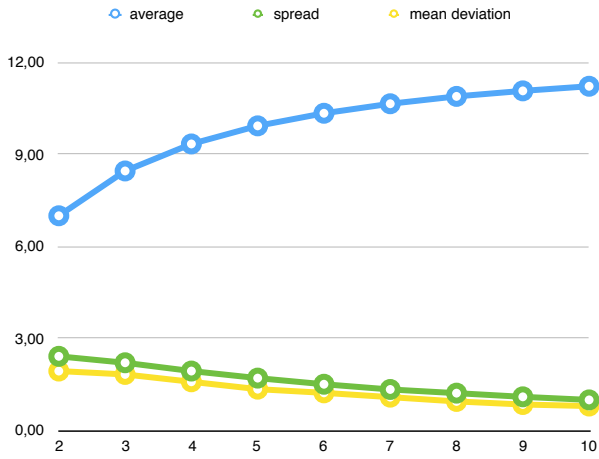
Story Points / Karma

In Dragon Brigade they are called „Story Points“. In other games Karma or Fate Points or similar. Anyway, if the players have a kind of „thing“ to turn things their way, then each point spend this way allows them to add the next-highest die. Spend one Story Point and you can add the 3rd highest die to your total, etc.

The brilliance of this is: Even with unlimited story dice, your skill level still limits you. A total beginner still has a low chance to get great results!

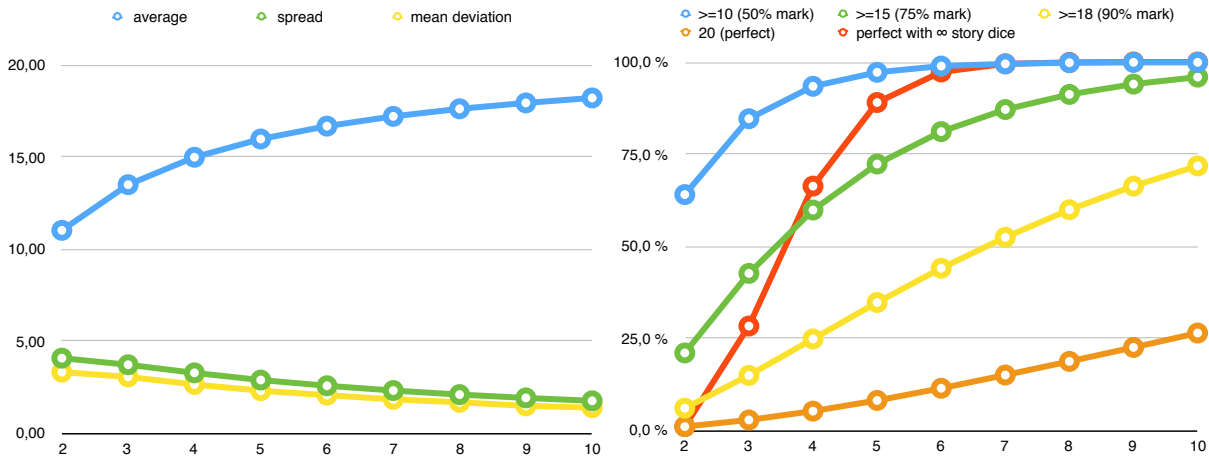
using d6

	average	spread	mean deviation	avg. in % of max	>=6 (50% mark)	>=9 (75% mark)	>=11 (90% mark)	12 (perfect)	perfect with ∞ story dice
2	7,00	2,42	1,94	58,33 %	72,2 %	27,8 %	8,3 %	2,8 %	2,8 %
3	8,46	2,21	1,83	70,50 %	89,4 %	52,3 %	20,0 %	7,4 %	37,5 %
4	9,34	1,94	1,59	77,83 %	96,0 %	69,4 %	32,0 %	13,2 %	76,1 %
5	9,93	1,71	1,35	82,75 %	98,5 %	80,6 %	43,4 %	19,6 %	94,1 %
6	10,34	1,51	1,23	86,17 %	99,4 %	87,7 %	53,3 %	26,3 %	99,0 %
7	10,65	1,34	1,09	88,75 %	99,8 %	92,2 %	61,8 %	33,0 %	99,9 %
8	10,89	1,22	0,95	90,75 %	99,9 %	95,0 %	68,9 %	39,5 %	100,0 %
9	11,07	1,10	0,85	92,25 %	99,9 %	96,8 %	74,8 %	45,7 %	100,0 %
10	11,22	1,00	0,80	93,50 %	100,0 %	97,9 %	79,5 %	51,5 %	100,0 %



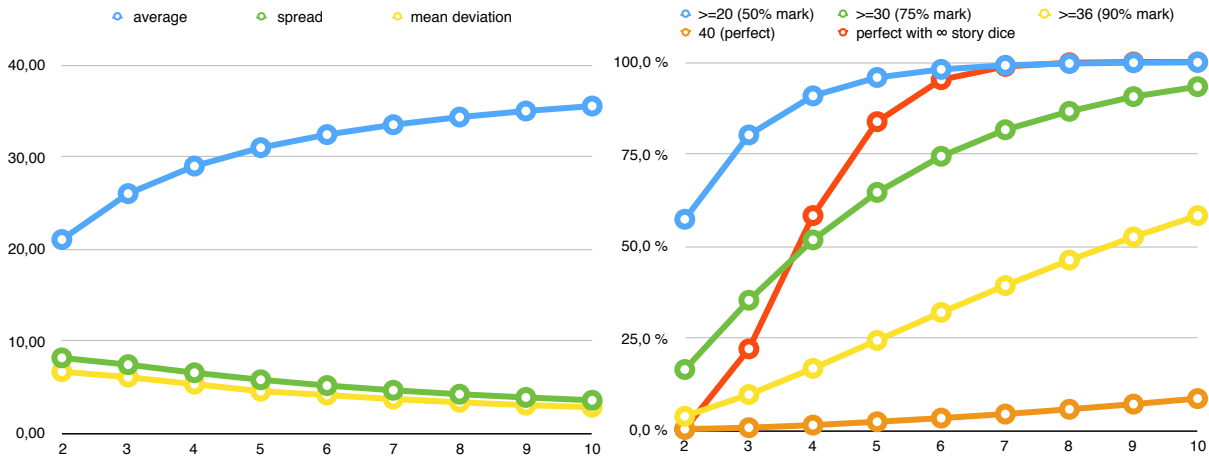
using d10

	average	spread	mean deviation	avg. in % of max	>=10 (50% mark)	>=15 (75% mark)	>=18 (90% mark)	20 (perfect)	perfect with ∞ story dice
2	11,00	4,06	3,30	55,00 %	64,0 %	21,0 %	6,0 %	1,0 %	1,0 %
3	13,48	3,70	3,04	67,40 %	84,6 %	42,6 %	14,9 %	2,8 %	28,3 %
4	14,97	3,26	2,63	74,85 %	93,4 %	59,8 %	24,8 %	5,2 %	66,3 %
5	15,96	2,87	2,29	79,80 %	97,2 %	72,3 %	34,7 %	8,1 %	89,0 %
6	16,66	2,56	2,05	83,30 %	98,9 %	81,1 %	44,0 %	11,4 %	97,3 %
7	17,19	2,30	1,82	85,95 %	99,5 %	87,1 %	52,4 %	15,0 %	99,5 %
8	17,60	2,08	1,66	88,00 %	99,8 %	91,2 %	59,9 %	18,7 %	99,9 %
9	17,92	1,90	1,47	89,60 %	99,9 %	94,0 %	66,3 %	22,5 %	100,0 %
10	18,19	1,74	1,37	90,95 %	99,9 %	95,9 %	71,8 %	26,4 %	100,0 %



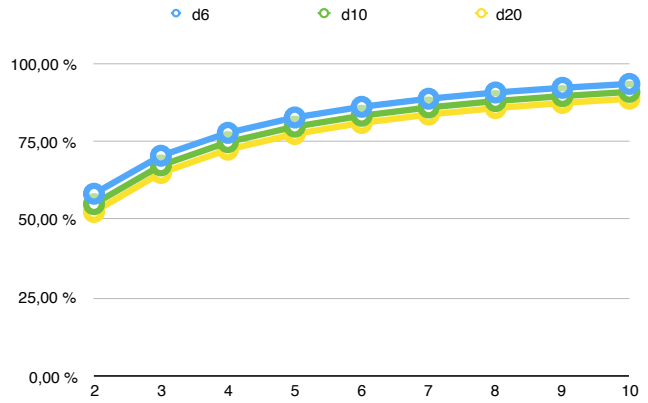
using d10

	average	spread	mean deviation	avg. in % of max	>=20 (50% mark)	>=30 (75% mark)	>=36 (90% mark)	40 (perfect)	perfect with ∞ story dice
2	21,00	8,15	6,65	52,50 %	57,3 %	16,5 %	3,8 %	0,3 %	0,3 %
3	25,99	7,41	6,05	64,98 %	80,2 %	35,3 %	9,7 %	0,7 %	22,1 %
4	28,98	6,53	5,29	72,45 %	90,8 %	51,7 %	16,8 %	1,4 %	58,3 %
5	30,98	5,77	4,53	77,45 %	95,8 %	64,6 %	24,4 %	2,3 %	83,8 %
6	32,40	5,14	4,11	81,00 %	98,0 %	74,4 %	32,0 %	3,3 %	95,2 %
7	33,47	4,63	3,67	83,68 %	99,1 %	81,6 %	39,3 %	4,4 %	98,8 %
8	34,30	4,20	3,32	85,75 %	99,6 %	86,6 %	46,2 %	5,7 %	99,8 %
9	34,96	3,85	3,01	87,40 %	99,8 %	90,6 %	52,5 %	7,1 %	100,0 %
10	35,50	3,54	2,79	88,75 %	99,9 %	93,3 %	58,3 %	8,6 %	100,0 %



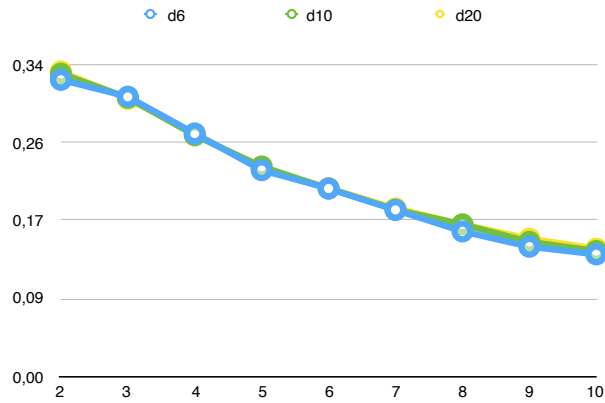
average in % of max

	d6	d10	d20
2	58,33 %	55,00 %	52,50 %
3	70,50 %	67,40 %	64,98 %
4	77,83 %	74,85 %	72,45 %
5	82,75 %	79,80 %	77,45 %
6	86,17 %	83,30 %	81,00 %
7	88,75 %	85,95 %	83,68 %
8	90,75 %	88,00 %	85,75 %
9	92,25 %	89,60 %	87,40 %
10	93,50 %	90,95 %	88,75 %



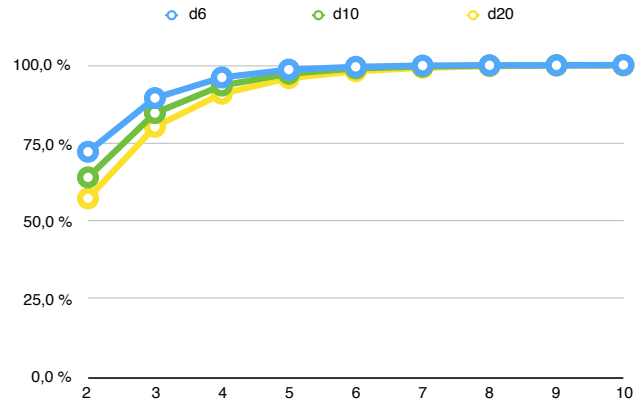
mean deviation in fraction of one die

	d6	d10	d20
2	0,32	0,33	0,33
3	0,31	0,30	0,30
4	0,27	0,26	0,26
5	0,23	0,23	0,23
6	0,21	0,21	0,21
7	0,18	0,18	0,18
8	0,16	0,17	0,17
9	0,14	0,15	0,15
10	0,13	0,14	0,14



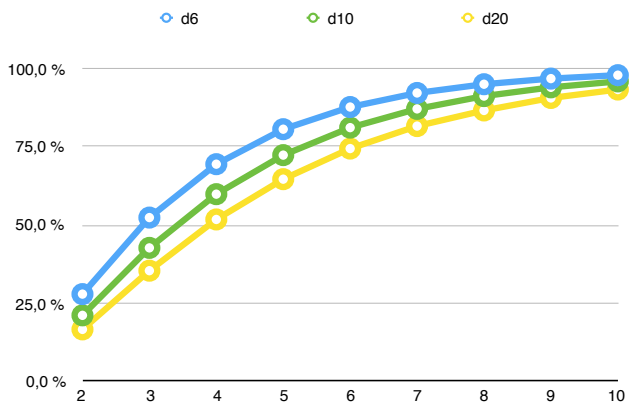
50% mark

	d6	d10	d20
2	72,2 %	64,0 %	57,3 %
3	89,4 %	84,6 %	80,2 %
4	96,0 %	93,4 %	90,8 %
5	98,5 %	97,2 %	95,8 %
6	99,4 %	98,9 %	98,0 %
7	99,8 %	99,5 %	99,1 %
8	99,9 %	99,8 %	99,6 %
9	99,9 %	99,9 %	99,8 %
10	100,0 %	99,9 %	99,9 %



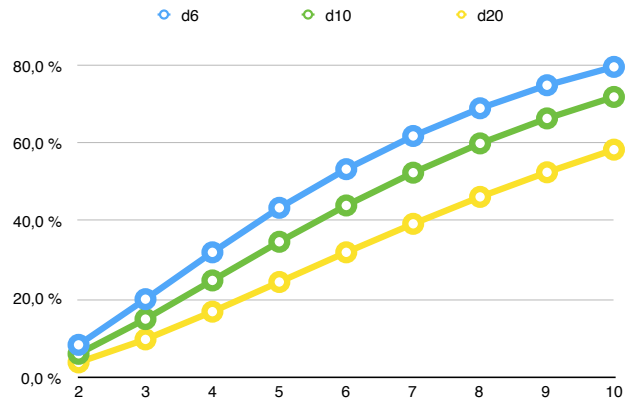
75% mark

	d6	d10	d20
2	27,8 %	21,0 %	16,5 %
3	52,3 %	42,6 %	35,3 %
4	69,4 %	59,8 %	51,7 %
5	80,6 %	72,3 %	64,6 %
6	87,7 %	81,1 %	74,4 %
7	92,2 %	87,1 %	81,6 %
8	95,0 %	91,2 %	86,6 %
9	96,8 %	94,0 %	90,6 %
10	97,9 %	95,9 %	93,3 %



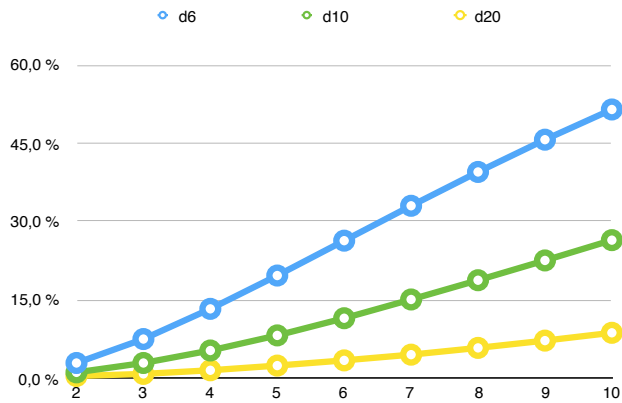
90% mark

	d6	d10	d20
2	8,3 %	6,0 %	3,8 %
3	20,0 %	14,9 %	9,7 %
4	32,0 %	24,8 %	16,8 %
5	43,4 %	34,7 %	24,4 %
6	53,3 %	44,0 %	32,0 %
7	61,8 %	52,4 %	39,3 %
8	68,9 %	59,9 %	46,2 %
9	74,8 %	66,3 %	52,5 %
10	79,5 %	71,8 %	58,3 %



perfection mark

	d6	d10	d20
2	2,8 %	1,0 %	0,3 %
3	7,4 %	2,8 %	0,7 %
4	13,2 %	5,2 %	1,4 %
5	19,6 %	8,1 %	2,3 %
6	26,3 %	11,4 %	3,3 %
7	33,0 %	15,0 %	4,4 %
8	39,5 %	18,7 %	5,7 %
9	45,7 %	22,5 %	7,1 %
10	51,5 %	26,4 %	8,6 %



perfection with unlimited story dice

	d6	d10	d20
2	2,8 %	1,0 %	0,3 %
3	37,5 %	28,3 %	22,1 %
4	76,1 %	66,3 %	58,3 %
5	94,1 %	89,0 %	83,8 %
6	99,0 %	97,3 %	95,2 %
7	99,9 %	99,5 %	98,8 %
8	100,0 %	99,9 %	99,8 %
9	100,0 %	100,0 %	100,0 %
10	100,0 %	100,0 %	100,0 %

