Supported Formulas

Basics

- 2d6 -- roll 2 dice of 6 sides

Special dice variations

- 4dF -- roll 4 fudge dice (sides: `[-1, -1, 0, 0, 1, 1]`)
- 1d% -- roll 1 percentile dice (equivalent to 1d100)
- 1D66 -- roll 1 D66, aka 1d6*10 + 1d6
    - ***NOTE***: you *must* use uppercase D66, lowercase d66 will be interpreted as a 66-sided die

Exploding dice

- 4d6! -- roll 4 6-sided dice, explode if max (6) is rolled (re-roll and include in results)
    - 4d6 !=5 or 4d6!5 -- explode a roll if equal to 5
    - 4d6 !>=4 - explode if >= 4
    - 4d6 !<=2 - explode if <=2
    - 4d6 !>5 - explode if > 5
    - 4d6 !<2 - explode if <2
    - To explode only once, use syntax !o
        - 4d6 !o<5

Compounding Dice (Shadowrun, L5R, etc.)

Like exploding, but additional rolls for each dice are added together as a single "roll"

- 5d6 !! -- roll 5 6-sided dice, compound
    - 5d6 !!=5 or 5d6!5 -- compound a roll if equal to 5
    - 5d6 !!>=4 - compound if >= 4
    - 5d6 !!<=4 - compound if <= 4
    - 5d6 !!>5 - compound if > 5
    - 5d6 !!<3 - compound if < 3
    - To compound only once, use syntax !!o
        - 5d6 !!o<2

Rerolling Dice

- 4d4 r2 -- roll 4d4, re-roll any result = 2
- 4d4 r=2 -- roll 4d4, re-roll any result = 2
- 4d4 r<=2 -- roll 4d4, re-roll any <= 2
- 4d4 r>=3 -- roll 4d4, re-roll any >= 3
- 4d4 r<2 -- roll 4d4, re-roll any < 2
- 4d4 r>3 -- roll 4d4, re-roll any > 3
- To reroll only once, use syntax ro
    - 4d4 ro<2

Keeping & Dropping Dice

- keeping dice:
    - 3d20 k 2 -- roll 3d20, keep 2 highest
    - 3d20 kh 2 -- roll 3d20, keep 2 highest
    - 3d20 kl 2 -- roll 3d20, keep 2 lowest
- dropping dice:
    - 4d6 -H -- roll 4d6, drop 1 highest
    - 4d6 -L -- roll 4d6, drop 1 lowest
    - 4d6 -H2 -- roll 4d6, drop 2 highest
    - 4d6 -L2 -- roll 4d6, drop 2 lowest

    - 4d6 ->5 -- roll 4d6, drop any results > 5
    - 4d6 -<2 -- roll 4d6, drop any results < 2
    - 4d6 ->=5 -- roll 4d6, drop any results >= 5
    - 4d6 -<=2 -- roll 4d6, drop any results <= 2
    - 4d6 -=1 -- roll 4d6, drop any results equal to 1
    - NOTE: the drop operators have higher precedence than the arithmetic operators; 4d10-L2+2 is equivalent to (4d10-L2)+2
    - NOTE: drop is not subtraction.
        - 4d6 - 3 -- roll 4d6, subtract 3
        - 4d6 - 2d6 -- roll 4d6, subtract the result of rolling 2d6

Round, Cap and Clam

- cap/clamp:
    - 4d20 C<5 -- roll 4d20, change any value < 5 to 5
    - 4d20 C>15 -- roll 4d20, change any value > 15 to 15

Counting on Dice Rolls

- counting:
    - 4d6 # -- how many results?
        - For example, you might use this to count # of dice above a target. (5d10 -<6)# -- roll 5 d10, drop any less than 6, count results
    - 4d6 #>3 -- roll 4d6, count any > 3
    - 4d6 #<3 -- roll 4d6, count any < 3
    - 4d6 #>=5 -- roll 4d6, count any >= 5
    - 4d6 #<=2 -- roll 4d6, count any <= 2
    - 4d6 #=5 -- roll 4d6, count any equal to 5
- counting (critical) success/failures
    - A normal count operation # discards the rolled dice and changes the result to be the count
        - For example, 2d6#<=3 rolls [3,4] then counts which results are <=3 , returning [1]
    - But, sometimes you want to be able to count successes/failures without discarding the dice rolls. In this case, use modifiers #s, #f, #cs, #cf to add metadata to the results.

        - 6d6 #f<=2 #s>=5 #cs6 -- roll 6d6, count results <= 2 as failures, >= 5 as successes, and =6 as critical successes.
            - returns a result like: RollResult(total: 22, results: [6, 2, 1, 5, 3, 5] {failures: {count: 2, target: #f<=2}, successes: {count: 3, target: #s>=5}, critSuccesses: {count: 1, target: #cs6}})

Arithmetic operations

- arithmetic operations
    - parenthesis for order of operations
    - addition is a little special -- could be a sum of ints, or it can be used to aggregate results of multiple dice rolls
        - Addition of integers is the usual sum
            - 4+5
            - 2d6 + 1
        - Addition of roll results combines the results (use parenthesis to ensure the order of operations is what you desire)
            - (5d6+5d10)-L2 -- roll 5d6 and 5d10, and from aggregate results drop the lowest 2.
            - 5d6+5d10-L2 -- roll 5d6 and 5d10, and from only the 5d10 results drop the lowest 2. equivalent to 5d6+(5d10-L2)
    - * for multiplication
    - - for subtraction
    - numbers must be integers
    - division is not supported.

Thanks, keep in touch!

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