



$$\begin{aligned}
 & \frac{\sum_{i=1}^n (R_i - \bar{R})^2}{n-1} = \frac{\sum_{i=1}^n R_i^2 - n\bar{R}^2}{n-1} \\
 & R = \frac{\sum_{i=1}^n R_i}{n} \\
 & \frac{\sum_{i=1}^n R_i^2}{n} - \frac{(\sum_{i=1}^n R_i)^2}{n^2} = \frac{\sum_{i=1}^n R_i^2}{n} - \frac{(\sum_{i=1}^n R_i)^2}{n^2}
 \end{aligned}$$

**2020 1**

R		
R 3%	0	0.00
3% > R 2%	0	0.00
2% > R 1%	12	822,650.93
1% > R 0%	44	6,161,448.77
0% > R -1%	12	654,454.85
R < -1%	0	0.00
	68	7,638,554.55

1. 2020 1 1

2.

R

3.

5-6