

Mixed Results

Doc K	Rel(K)	AP@K Term
Doc 1	1	1/3
Doc 2	0	0
Doc 3	1	2/9
Doc 4	0	0
Doc 5	0	0
Doc 6	1	1/6

$$\text{AP@K} = 1/3 + 2/9 + 1/6 = 13/18$$

Best Case

Doc K	Rel(K)	AP@K Term
Doc 1	1	1/3
Doc 2	1	1/3
Doc 3	1	1/3
Doc 4	0	0
Doc 5	0	0
Doc 6	0	1/6

$$\text{AP@K} = 1/3 + 1/3 + 1/3 = 1$$

Worst Case

Doc K	Rel(K)	AP@K Term
Doc 1	0	0
Doc 2	0	0
Doc 3	0	0
Doc 4	1	1/12
Doc 5	1	2/15
Doc 6	1	1/6

$$\text{AP@K} = 1/12 + 2/15 + 1/6 = 23/60$$