

Jim's Equation v. 2^n as a Model for Spiritual Multiplication

f = 1 <- number of fervent believers produced by other fervent believers in a time period Assumes starting with 1 fervent believer
n = 2 <- number of nominal believers produced by other fervent believers in a time period
m = 1 <- number of nominal believers produced by other nominal believers in a time period

	end of T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
fervent	2	4	8	16	32	64	128	256	512	1024	2048	4096	8192	16384	32768	65536	131072	262144	524288	1048576
nominal	2	8	24	64	160	384	896	2048	4608	10240	22528	49152	106496	229376	491520	1048576	2228224	4718592	9961472	20971520
Total	4	12	32	80	192	448	1024	2304	5120	11264	24576	53248	114688	245760	524288	1114112	2359296	4980736	10485760	22020960
2^N model	2	4	8	16	32	64	128	256	512	1024	2048	4096	8192	16384	32768	65536	131072	262144	524288	1048576

Total number of fervent believers at end of period T is:

$$F_T = F_0(1 + f)^T,$$

where F_0 = number of original fervent believers (1 in this case)

Total number of nominal believers at end of period T is:

$$N_T = n \sum_{i=1}^T (1 + f)^{T-i} (1 + m)^{i-1},$$

where F_0 = number of original fervent believers (1 in this case)
