1.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
2	$	1000	1060	1124	1191	1262	1338	1419	1504	1594	1689	1791	1898	2012	2133	2261	2397	2540	2693	2854	3026	3207	3400	3604	3820	4049	4292	

a) i) $1791 $3207 $4292 ii) slightly less than twelve years

b) It doesn't matter how much money is started with, it will always take slightly less than 12 years to double if the rate is 6%

c)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
2	$	2000	2240	2509	2810	3147	3525	3948	4421	4952	5546	6212	6957	7792	8727	9774	10947	12261	13732	15380	17226	19293	21608	24201	27105	30357	34000	
3																												

i) $6212, $19293, $34,000 ii) slightly more than 6 years

2.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Year	0	1	2	3	4	5	6	7	8	9	10	
2	$	$10.00	$11.40	$13.00	$14.82	$16.89	$19.25	$21.95	$25.02	$28.53	$32.52	$37.07	

percent change= (37.07-10)/10=270%

3. We can see in the snippet that somewhere before year 24 the grey squirrels rule.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Year	0	6	12	18	24	30	36	42	48	54	60	
2	Grey	1000	2000	4000	8000	16000	32000	64000	128000	256000	512000	1024000	
3													
4	Year	0	8	16	24	32	40	48	56	64	72	80	
5	Red	150000	75000	37500	18750	9375	4687.5	2343.75	1171.88	585.938	292.969	146.484	

Let's try to get a better approximation by using a guess and check method.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
2	Grey	1000	1122	1260	1414	1587	1782	2000	2245	2520	2828	3175	3564	4000	4490	5040	5657	6349	7127	8000	8979	10079	11313	12699	14254	15999	17959	20158
3	Red	150000	137550	126133	115664	106064	97261	89188	81786	74997	68773	63064	57830	53030	48629	44593	40891	37497	34385	31531	28914	26514	24313	22295	20445	18748	17192	15

In the 24th year the greys will overtake the reds. Around year 28 (not shown in above snippet) the grey population will double the red population