Test Result							
t	S0	r	sigma	Delta_t	N	Sample mean	Sample std
1	1	0.5	0.5	0.05	50	1.5812	1.0405
1	1	0.5	0.5	0.005	500	1.6533	0.8956
1	1	0.5	0.5	0.0005	5000	1.6478	0.8656

Test result are listed above, we have formulas:

$$E[S_t] = S_0 e^{rt}$$

and

$$Std(S_t) = S_0 e^{rt}\sqrt{e^{\sigma^2 t} - 1}$$

Then we can calculate the right answers:

$$E[S_t] = 1.6487$$

and

$$Std(S_t) = 0.8787$$

Obviously, the results converge to the right answers.