

# RISK And RETURN

- A stock earns the following returns over a five year period:  $R1 = 0.30$ ,  $R2 = -0.20$ ,  $R3$
- $= -0.12$ ,  $R4 = 0.38$ ,  $R5 = 0.42$ ,  $R6 = 0.36$ .  
*Calculate the following: (a) arithmetic*
- mean return, (b) geometric mean return.

# Answer

- Geometric Mean
- $= [(1.30) (0.80) (0.88) (1.38) (1.42) (1.36)]^{1/6} - 1 = 0.1602$  or 16.02 %

- A stock earns the following returns over a five year period:  $R1 = 10\%$ ,  $R2 = 16\%$ ,  $R3 = 24\%$ ,  $R4 = -2\%$ ,  $R5 = 12\%$ ,  $R6 = 15\%$ .  
*Calculate the following: (a) arithmetic mean return, (c) geometric mean return.*

# Answer

- Geometric Mean
- $= [(1.10) (1.16) (1.24) (0.98) (1.12) (1.15)]^{1/6} - 1 = 0.1222$  or 12.22 %

What is the expected return and standard deviation of returns for the stock described

Period	Return in %
1	30
2	-20
3	-12
4	38
5	42
6	36

What is the expected return and standard deviation of returns for the stock described in 2?

Period	Return in %
1	10
2	16
3	24
4	-2
5	12
6	15

The following table, gives the rate of return on stock of Apple Computers and on the market portfolio for five years . (i) What is the beta of the stock of Apple Computers?

Year	Return on the stock Return	Return Market Portfolio (%)
1	-13	-3
2	5	2
3	15	8
4	27	12
5	10	7



The rate of return on the stock of Sigma Technologies and on the market portfolio for 6 periods has been as follows: What is the beta of the stock of Sigma Technologies.?

Year	Return on the stock Return	Return Market Portfolio (%)
1	16	14
2	12	10
3	-9	6
4	32	18
5	15	12
6	18	15