proceeds to buy more of stock *A*. The correlation between the t
curities is .25. What are the expected return and standard deviation of
portfolio?

16. Both the covariance and the correlation coefficient measure the extent to wh
the returns on securities move together. What is the relationship between the
statistical measures? Why is the correlation coefficient a more conveni
measure?

17. Give an example of two common stocks that you would expect to exhibit a
atively low correlation. Then give an example of two that would have a relati
ly high correlation.

18. Gibby Brock has estimated the following joint probability distribution of retu
for investments in the stock of Lakeland Halfway Homes and Afton Brewery

Lakeland	Afton	Probability
−10%	15%	.15
5	10	.20
10	5	.30
20	0	.35

On the basis of Gibby's estimates, calculate the covariance and correlation co
efficient between the two investments.

19. Calculate the correlation matrix that corresponds to the variance-covariance
matrix given in the text for Able, Baker, and Charlie.

20. Given the following variance-covariance matrix for three securities, as well as
the percentage of the portfolio for each security, calculate the portfolio's stan-
dard deviation.

	Security *A*	Security *B*	Security *C*
Security *A*	459		
Security *B*	−211	312	
Security *C*	112	215	179
	$X_A = .50$	$X_B = .30$	$X_C = .20$

21. Rube Bressler owns three stocks and has estimated the following joint proba-
bility distribution of returns:

Outcome	Stock *A*	Stock *B*	Stock *C*	Probability
1	−10	10	0	.30
2	0	10	10	.20
3	10	5	15	.30
4	20	−10	5	.20

Calculate the portfolio's expected return and standard deviation if Rube invests 20% in stock *A*, 50% in stock *B*, and 30% in stock *C*. Assume that each security's return is completely uncorrelated with the returns of the other securities.

22. If a portfolio's expected return is equal to the weighted average of the expect-
ed returns of the component securities, why is a portfolio's risk not generally
equal to the weighted average of the component securities' standard deviations?

their correlation is:

a. 0.9
b. 0.0
c. −0.9

25. Listed here are estimates of the
for three stocks.

Stock	Standard Deviation
A	12%
B	15
C	10

a. If a portfolio is composed o
portfolio's standard deviatio
b. If a portfolio is composed of
C, what is the portfolio's sta
c. If you were asked to design a
investment in each stock
[Hint: Some algebra is ne
$X_B = (1 - X_A)$.]

26. (Appendix Question) Calcula
stock having the following pro

Return
−40%
−10
0
+15
+30
+40
+50

27. (Appendix Question) Bear Tr
bility distribution of next year
cording to Bear Tracks, what i

Divid
$1.(
1.(
2.(
2.(
2.
2.

you agree with the assumptions of nonsatiation and risk aversion? Make a case for or against these assumptions.

13. At the beginning of the year, Corns Bradley owned four securities in the following amounts and with the following current and expected end-of-year prices:

Security	Share Amount	Current Price	Expected Year-End Price
A	100	$50	$60
B	200	35	40
C	50	25	50
D	100	100	110

What is the expected return on Corns's portfolio for the year?

14. Given the following information about four stocks comprising a portfolio, calculate each stock's expected return. Then, using these individual securities' expected returns, calculate the portfolio's expected return.

Stock	Initial Investment Value	Expected End-of-Period Investment Value	Proportion of Portfolio Initial Market Value
A	$500	$700	19.2%
B	200	300	7.7
C	1,000	1,000	38.5
D	900	1,500	34.6

15. Squeaky Bluege has been considering an investment in Oakdale Merchandising. Squeaky has estimated the following probability distribution of returns for Oakdale stock:

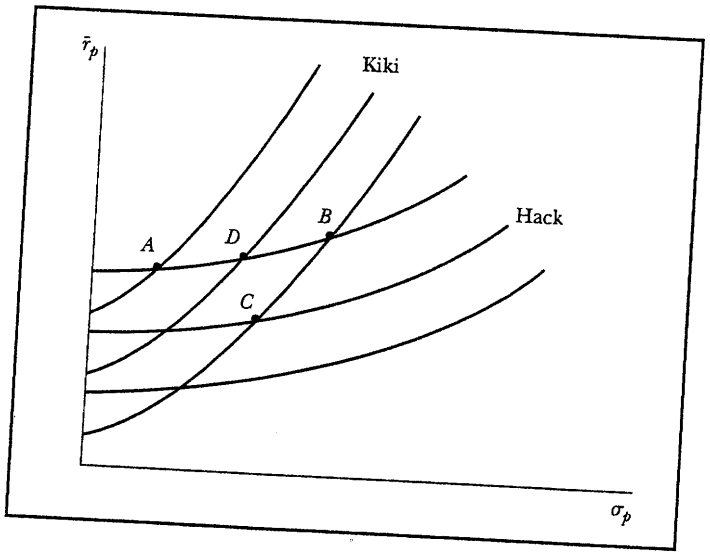
Return	Probability
−10%	.10
0	.25
10	.40
20	.20
30	.05

On the basis of Squeaky's estimates, calculate the expected return and standard deviation of Oakdale stock.

4	14	30	10
5	10	0	20
6	11	10	20
7	14	20	20
8	19	30	20
9	15	0	30
10	16	10	30
11	19	20	30
12	24	30	30

3. Why are the indifference curves of typical investors assumed to slope upward to the right?
4. What does a set of convex indifference curves imply about an investor's trade-off between risk and return as the amount of risk varies?
5. Why are typical investors assumed to prefer portfolios on indifference curves lying to the northwest?
6. What is meant by the statement that "risk-averse investors exhibit diminishing marginal utility of income"? Why does diminishing marginal utility cause an investor to refuse to accept a "fair bet"?
7. Explain why an investor's indifference curves cannot intersect.
8. Why are the indifference curves of more risk-averse investors more steeply sloped than those of investors with less risk aversion?
9. Consider the following two sets of indifference curves for investors Hack Wilson and Kiki Cuyler. Determine whether Hack or Kiki:
   a. Is more risk-averse
   b. Prefers investment A to investment B
   c. Prefers investment C to investment D

   Explain the reasons for your answers.



D

Are any of these stocks preferr

11. Do you agree with the assumpti
for or against these assumptio
12. At the beginning of the year,
lowing amounts and with the f

Security	Sh Amo
A	1(
B	2(
C	5
D	1(

What is the expected return o

13. Given the following informati
culate each stock's expected r
pected returns, calculate the p

Stock	Initial Investment Value
A	$500
B	200
C	1,000
D	900

14. Squeaky Bluege has been cor
ing. Squeaky has estimated th
Oakdale stock:

Retu
−10
0
10
20
30

On the basis of Squeaky's estin
deviation of Oakdale stock.