Jim Busby calls his broker to inquire about purchasing a bond of Disk Storage Systems. His broker quotes a price of $1,100. Jim is concerned that the bond might be overpriced based on the facts involved. The $1,000 par value bond pays 14 percent interest, and it has 18 years remaining until maturity. The current yield to maturity on similar bonds is 12 percent.

a. Calculate the present value of the bond. Use Appendix B and Appendix D for an approximate answer but calculate your final answer using the formula and financial calculator methods. **(Do not round intermediate calculations. Round your final answer to 2 decimal places. Assume interest payments are annual.)**

Present value	

b. Do you think the bond is overpriced?

- No
- Yes

Compute K_e and K_n under the following circumstances:

a. $D_1 = \$7.00$, $P_0 = \$78$, $g = 4\%$, $F = \$3.00$. **(Do not round intermediate calculations. Round your answers to 2 decimal places.)**

Ke		%
Kn		%

b. $D_1 = \$0.40$, $P_0 = \$38$, $g = 5\%$, $F = \$2.00$. **(Do not round intermediate calculations. Round your answers to 2 decimal places.)**

Ke		%
Kn		%

c. E_1 (earnings at the end of period one) = $6, payout ratio equals 30 percent, P_0 = $42, g = 10.0%, F = $3.50. **(Do not round intermediate calculations. Round your answers to 2 decimal places.)**

Ke		%
Kn		%

d. D_0 (dividend at the beginning of the first period) = $4, growth rate for dividends and earnings (g) = 5%, P_0 = $68, F = $5. **(Do not round intermediate calculations. Round your answers to 2 decimal places.)**

Ke		%
Kn		%

Airborne Airlines Inc. has a $1,000 par value bond outstanding with 20 years to maturity. The bond carries an annual interest payment of $106 and is currently selling for $860. Airborne is in a 40 percent tax bracket. The firm wishes to know what the aftertax cost of a new bond issue is likely to be. The yield to maturity on the new issue will be the same as the yield to maturity on the old issue because the risk and maturity date will be similar.

a. Compute the yield to maturity on the old issue and use this as the yield for the new issue. **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Yield on new issue		%

b. Make the appropriate tax adjustment to determine the aftertax cost of debt. **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Aftertax cost of debt		%

Sauer Milk Inc. wants to determine the minimum cost of capital point for the firm. Assume it is considering the following financial plans:

	Cost (aftertax)	Weights
Plan A		
Debt	4.0%	10%
Preferred stock	8.0	5
Common equity	12.0	85
Plan B		
Debt	4.5%	20%
Preferred stock	8.5	5
Common equity	13.0	75
Plan C		
Debt	5.0%	30%
Preferred stock	8.7	5
Common equity	8.8	65
Plan D		
Debt	7.0%	40%
Preferred stock	9.2	5
Common equity	10.5	55

a-1. Compute the weighted average cost for four plans. **(Do not round intermediate calculations. Input your answers as a percent rounded to 2 decimal places.)**

	Weighted Cost	
Plan A		%
Plan B		%
Plan C		%
Plan D		%

Assume a firm has earnings before depreciation and taxes of $590,000 and no depreciation. It is in a 40 percent tax bracket.

a. Compute its cash flow.

Cash flow

b. Assume it has $590,000 in depreciation. Recompute its cash flow.

Cash flow

c. How large a cash flow benefit did the depreciation provide?

Benefit in cash flow

Delta Corporation has the following capital structure:

	Cost (aftertax)	Weights	Weighted Cost
Debt (K_d)	9.0%	25%	2.25%
Preferred stock (K_p)	8.2	5	0.41
Common equity (K_e) (retained earnings)	15.2	70	10.64
Weighted average cost of capital (K_a)			13.30%

a. If the firm has $35 million in retained earnings, at what size capital structure will the firm run out of retained earnings? **(Enter your answer in millions of dollars (e.g., $10 million should be entered as "10").)**

Capital structure size (X) million

b. The 9.0 percent cost of debt referred to earlier applies only to the first $12 million of debt. After that the cost of debt will go up. At what size capital structure will there be a change in the cost of debt? **(Enter your answer in millions of dollars (e.g., $10 million should be entered as "10").)**

Capital structure size (Z) million

Skyline Corp. will invest $270,000 in a project that will not begin to produce returns until the end of the 3rd year. From the end of the 3rd year until the end of the 12th year (10 periods), the annual cash flow will be $62,000.

Use Appendix B and Appendix D for an approximate answer but calculate your final answer using the formula and financial calculator methods.

a. Calculate the net present value if the cost of capital is 12 percent. **(Negative amount should be indicated by a minus sign. Do not round intermediate calculations and round your answer to 2 decimal places.)**

Net present value

The preferred stock of Denver Savings and Loan pays an annual dividend of $7.50. It has a required rate of return of 10 percent.

Compute the price of the preferred stock. **(Do not round intermediate calculations. Round your answer to 2 decimal places.)**

Price

Lance Whittingham IV specializes in buying deep discount bonds. These represent bonds that are trading at well below par value. He has his eye on a bond issued by the Leisure Time Corporation. The $1,000 par value bond pays 6 percent annual interest and has 15 years remaining to maturity. The current yield to maturity on similar bonds is 11 percent. Use Appendix B and Appendix D for an approximate answer but calculate your final answer using the formula and financial calculator methods.

a. What is the current price of the bonds? **(Do not round intermediate calculations. Round your final answer to 2 decimal places. Assume interest payments are annual.)**

Current price of the bond	

b. By what percent will the price of the bonds increase between now and maturity? **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Price increases by		%

Assume a $150,000 investment and the following cash flows for two products:

Year	Product X	Product Y
1	$40,000	$60,000
2	40,000	50,000
3	60,000	20,000
4	10,000	40,000

a. Calculate the payback for products X and Y. **(Do not round intermediate calculations. Round your answers to 2 decimal places.)**

Product X		years
Product Y		years

Assume a firm has earnings before depreciation and taxes of $470,000 and depreciation of $170,000.

a. If it is in a 35 percent tax bracket, compute its cash flow.

Cash flow	

b. If it is in a 20 percent tax bracket, compute its cash flow.

Cash flow	

Refer to Table 10-1, which is based on bonds paying 10 percent interest for 20 years. Assume interest rates in the market (yield to maturity) decline from 20 percent to 10 percent.

a. What is the bond price at 20 percent?

Bond price	

b. What is the bond price at 10 percent?

Bond price	

c. What would be your percentage return on investment if you bought when rates were 20 percent and sold when rates were 10 percent? **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Return on investment		%	

Stilley Resources bonds have 20 years left to maturity. Interest is paid annually, and the bonds have a $1,000 par value and a coupon rate of 20.5 percent.

If the price of the bond is $1,410, what is the yield to maturity? **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Yield to maturity		%

The Hudson Corporation makes an investment of $38,250 that provides the following cash flow:

Year	Cash Flow
1	$19,000
2	19,000
3	13,000

Use Appendix B and Appendix D for an approximate answer but calculate your final answer using the formula and financial calculator methods.

a. What is the net present value at a discount rate of 11 percent? **(Do not round intermediate calculations and round your answer to 2 decimal places.)**

Net present value	

b. What is the internal rate of return? **(Do not round intermediate calculations. Enter your answer as a percent rounded to 2 decimal places.)**

Internal rate of return		%

Speedy Delivery Systems can buy a piece of equipment that is anticipated to provide an 5 percent return and can be financed at 2 percent with debt. Later in the year, the firm turns down an opportunity to buy a new machine that would yield a 12 percent return but would cost 14 percent to finance through common equity. Assume debt and common equity each represent 50 percent of the firm's capital structure.

a. Compute the weighted average cost of capital. **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Weighted average cost of capital		%

Calculate the aftertax cost of debt under each of the following conditions. **(Do not round intermediate calculations. Input your answers as a percent rounded to 2 decimal places.)**

	Yield	Corporate Tax Rate	Aftertax Cost of Debt
a.	5.0 %	11 %	%
b.	7.0 %	25 %	%
c.	6.4 %	21 %	%

Jim Busby calls his broker to inquire about purchasing a bond of Disk Storage Systems. His broker quotes a price of $1,120. Jim is concerned that the bond might be overpriced based on the facts involved. The $1,000 par value bond pays 13 percent interest, and it has 20 years remaining until maturity. The current yield to maturity on similar bonds is 11 percent.

a. Calculate the present value of the bond. Use Appendix B and Appendix D for an approximate answer but calculate your final answer using the formula and financial calculator methods. **(Do not round intermediate calculations. Round your final answer to 2 decimal places. Assume interest payments are annual.)**

Present value	

A firm pays a $12.80 dividend at the end of year one (D_1), has a stock price of $88, and a constant growth rate (g) of 5 percent.

Compute the required rate of return (K_e). **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Rate of return		%

A firm pays a $1.50 dividend at the end of year one (D_1), has a stock price of $65 ($P_0$), and a constant growth rate (g) of 8 percent.

a. Compute the required rate of return (K_e). **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Rate of return		%

Indicate whether each of the following changes will increase or decrease the required rate of return (K_e). (Each question is separate from the others. That is, assume only one variable changes at a time.) No actual numbers are necessary.

b. If the dividend payment increases:

Dividend yield	
Required rate of return	

Russell Container Corporation has a $1,000 par value bond outstanding with 30 years to maturity. The bond carries an annual interest payment of $120 and is currently selling for $820 per bond. Russell Corp. is in a 40 percent tax bracket. The firm wishes to know what the aftertax cost of a new bond issue is likely to be. The yield to maturity on the new issue will be the same as the yield to maturity on the old issue because the risk and maturity date will be similar.

a. Compute the yield to maturity on the old issue and use this as the yield for the new issue. **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Yield on new issue		%

b. Make the appropriate tax adjustment to determine the aftertax cost of debt. **(Do not round intermediate calculations. Input your answer as a percent rounded to 2 decimal places.)**

Aftertax cost of debt		%

The Caffeine Coffee Company uses the modified internal rate of return. The firm has a cost of capital of 8 percent. The project being analyzed is as follows ($39,000 investment): Use Appendix A and Appendix B for an approximate answer but calculate your final answer using the formula and financial calculator methods.

Year	Cash Flow
1	$16,000
2	14,000
3	14,000

What is the modified internal rate of return? **(Do not round intermediate calculations. Enter your answer as a percent rounded to 2 decimal places.)**

Internal rate of return		%

Global Technology's capital structure is as follows:

Debt	35%
Preferred stock	15
Common equity	50

The aftertax cost of debt is 7.00 percent; the cost of preferred stock is 11.00 percent; and the cost of common equity (in the form of retained earnings) is 14.00 percent.

Calculate the Global Technology's weighted cost of each source of capital and the weighted average cost of capital. **(Do not round intermediate calculations. Input your answers as a percent rounded to 2 decimal places.)**

	Weighted Cost	
Debt		%
Preferred stock		
Common equity		
Weighted average cost of capital	0.00	%

Modos Company has deposited $4,030 in checks received from customers. It has written $1,520 in checks to its suppliers. The initial bank and book balance was $470. If $3,590 of its customers' checks have cleared, but only $470 of its own, calculate its float.

Multiple Choice

- $610
- $760
- $910
- $710

If Analog computers can borrow at 9.5% annually for three years, what is the effective rate of interest on a $880,000 loan where a 17% compensating balance is required? **(Use 360 days in a year. Round your answer to 2 decimal places.)**

Multiple Choice

- 14.20%
- 11.45%
- 16.75%
- 8.75%

If average daily remittances are $3 million, and "extended disbursement float" adds 8 days to the disbursement schedule, how much should the firm be willing to pay for a cash management system if the firm earns 15% on excess funds?

Multiple Choice

- $3,600,000
- $3,705,000
- $0
- $3,615,000

Lou Lewis borrows $11,000 to be repaid over 8 years at 7 percent. Repayment of principal in the first year is: Use Appendix D to calculate the answer. **(Round your intermediate calculations to the nearest dollar value.)**

Multiple Choice

- $1,299
- $1,072
- $1,842
- $1,156

Sharon Smith will receive $1.11 million in 30 years. The discount rate is 9%. As an alternative, she can receive $83,250 today. Which should she choose? Use Appendix B to calculate the answer.

Multiple Choice

- the $1.11 million dollars in 30 years.
- she should be indifferent.
- $83,250 today.
- need more information.

Kantorovich Company normally takes 25 days to pay for its average daily credit purchases of $2,100. It has average daily sales of $3,100, and collects accounts in 20 days. What is its net credit position?

Multiple Choice

- ($11,500)
- ($9,500)
- $10,500
- $9,500

You will deposit $7,000 today. It will grow for 6 years at 8% interest compounded semiannually. You will then withdraw the funds annually over the next 4 years. The annual interest rate is 6%. Your annual withdrawal will be: Use Appendix A and Appendix D to calculate the answer.

Multiple Choice

- $2,562
- $3,234
- $6,481
- $4,489

Holland Construction Co. has an outstanding 180-day bank loan of $404,000 at an annual interest rate of 9.6%. The company is required to maintain a 12% compensating balance in its checking account. What is the effective interest rate on the loan? Assume the company would not normally maintain this average amount. **(Use 360 days in a year. Round your answer to 2 decimal places.)**

Multiple Choice

- 13.91%
- 10.91%
- 12.91%
- 9.91%

Mike Carlson will receive $13,000 a year from the end of the third year to the end of the 13th year (11 payments). The discount rate is 8%. The present value today of this deferred annuity is: Use Appendix B and Appendix D to calculate the answer.

Multiple Choice

- $79,536
- $74,006
- $78,529
- $60,812

Pedro Gonzalez will invest $24,000 at the beginning of each year for the next 10 years. The interest rate is 7 percent. What is the future value? Use Appendix C to calculate the answer.

Multiple Choice

- $354,816.
- $345,852.
- $378,816.
- $331,584.

Price Corp. is considering selling to a group of new customers and creating new annual sales of $460,000. 4% will be uncollectible. The collection cost on all accounts is 3% of new sales, the cost of producing and selling is 79% of sales, and the firm is in the 18% tax bracket. What is the profit on new sales?

Multiple Choice

- $54,095
- $52,808
- $54,986
- $53,936

Mr. Blochirt is creating a college investment fund for his daughter. He will put in $11,000 per year for the next 14 years and expects to earn a 9% annual rate of return. How much money will his daughter have when she starts college? Use Appendix C to calculate the answer.

Multiple Choice

- $274,183
- $275,196
- 286,936
- $286,209