Chapter 2 The Business, Tax and Financial Environments

Homework Problems

2. The Loann Le Milling Company is going to purchase a new piece of testing equipment for $28,000 and a new machine for $53,000. The equipment falls in the three-year property class, and the machine is in the five-year class. What annual depreciation will the company be able to take on the two assets?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Recovery Year** | PROPERTY CLASS | | | |
| **3-year** | **5-year** | **7-year** | **10-year** |
| **1** | 33.33% | 20.00% | 14.29% | 10.00% |
| **2** | 44.45 | 32.00 | 24.49 | 18.00 |
| **3** | 14.81 | 19.20 | 17.49 | 14.40 |
| **4** | 7.41 | 11.52 | 12.49 | 11.52 |
| **5** |  | 11.52 | 8.93 | 9.22 |
| **6** |  | 5.76 | 8.92 | 7.37 |
| **7** |  |  | 8.93 | 6.55 |
| **8** |  |  | 4.46 | 6.55 |
| **9** |  |  |  | 6.56 |
| **10** |  |  |  | 6.55 |
| **11** |  |  |  | 3.28 |
| **Totals** | 100.00% | 100.00% | 100.00% | 100.00% |

3. Tripex Consolidated Industries owns $1.5 million in 12 percent bonds of Solow Electronics Company. It also owns 100,000 shares of preferred stock of Solow, which constitutes 10 percent of all outstanding Solow preferred shares. In the past year, Solow paid the stipulated interest on its bonds and dividends of $3 per share on its preferred stock. The marginal tax rate of Tripex is 34%. What taxes must Tripex pay on this interest and dividend income?

4. The Castle Cork Company was founded in 20X1 and had the following taxable income through 20X5:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 20X1 | 20X2 | 20X3 | 20X4 | 20X5 |
| $0 | $35,000 | $68,000 | -$120,000 | $52,000 |

Compute the corporate income tax refund in each year, assuming the graduated tax rates discussed in the chapter.

CORPORATE INCOME TAX

|  |  |  |  |
| --- | --- | --- | --- |
| Corporate Taxable Income | | Tax Rate (%) | Tax Calculation |
| At Least | But Less Than |
| $0 | $50,000 | 15 | .15 x (income over $0) |
| 50,000 | 75,000 | 25 | $7,500 + .25 x (income over 50,000) |
| 75,000 | 100,000 | 34 | 13,750 + .34 x (income over 75,000) |
| 100,000 | 335,000 | 39 | 22,250 + .39 x (income over 100,000) |
| 335,000 | 10,000,000 | 34 | 113,900 + .34 x (income over 335,000) |
| 10,000,000 | 15,000,000 | 35 | 3,400,000 + .35 x (income over 10,000,000) |
| 15,000,000 | 18,333,333 | 38 | 5,150,000 + .38 x (income over 15,000,000) |
| 18,333,333 | -- | 35 | 6,416,667 + .35 x (income over 18,333,333) |

5. Loquat Foods Company is able to borrow at an interest rate of 9 percent for one year. For the year, market participants 4 percent inf1ation.

a. What approximate real rate of return does the lender expect? What is the inflation premium embodied in the nominal interest rate?

b. If inflation proves to be 2 percent for the year, does the lender suffer? Does the borrower suffer? Why?

c. If inflation proves to be 6 percent, who gains and who loses?

6. From a recent Monday *Wall Street Journal*, collect yield information on yields for a long-term Treasury bond, a public utility bond (probably AA in quality), municipal bonds, as described by the municipal bond index, Treasury bills, and commercial paper. (This information appears at the back of the paper under the Bond Market section, the Monday Market Rates section, and the Treasury Issues section.) What reasons can you give for the differences in yield on these various instruments?