Anita Vasquez received $140,000 from her mother’s estate. She placed the funds into the hands of a broker, who purchased the following securities on Anita’s behalf:

|  |  |
| --- | --- |
| a. | Common stock was purchased at a cost of $70,000. The stock paid no dividends, but it was sold for $160,000 at the end of four years. |
| b. | Preferred stock was purchased at its par value of $19,000. The stock paid a 8% dividend (based on par value) each year for four years. At the end of four years, the stock was sold for $14,000. |
| c. | Bonds were purchased at a cost of $51,000. The bonds paid $3,060 in interest every six months. After four years, the bonds were sold for $59,000. (Note: In discounting a cash flow that occurs semiannually, the procedure is to halve the discount rate and double the number of periods. Use the same procedure in discounting the proceeds from the sale.) (Ignore income taxes.) |

|  |
| --- |
| The securities were all sold at the end of four years so that Anita would have funds available to start a new business venture. The broker stated that the investments had earned more than a 22% return, and he gave Anita the following computation to support his statement: |

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Common stock: |  |  |
| Gain on sale ($160,000 – $70,000) | $ | 90,000 |
| Preferred stock: |  |  |
| Dividends paid (8% × $19,000 × 4 years) |  | 6,080 |
| Loss on sale ($14,000 – $19,000) |  | (5,000) |
| Bonds: |  |  |
| Interest paid ($3,060 × 8 periods) |  | 24,480 |
| Gain on sale ($59,000 – $51,000) |  | 8,000 |
|  |  |  |
| Net gain on all investments | $ | 123,560 |
|  |  |  |
|  | | |

|  |  |  |
| --- | --- | --- |
|  | $123,560 ÷ 4 years | = 22.1% |
|  | $140,000 |

|  |
| --- |
| Click here to view [Exhibit 11B-1](http://lectures.mhhe.com/connect/0078025419/Exhibit/Exhibit%2011B-1.JPG) and [Exhibit 11B-2](http://lectures.mhhe.com/connect/0078025419/Exhibit/Exhibit%2011B-2.JPG), to determine the appropriate discount factor(s) using tables. |

|  |  |
| --- | --- |
| **Required:** | |
| **1a.** | Using a 22% discount rate, compute the net present value of each of the three investments. **(Negative amounts should be indicated by a minus sign. Round discount factor(s) to 3 decimal places, other intermediate calculations and final answers to the nearest whole dollar.)** |

|  |  |
| --- | --- |
|  | Net Present Value |
| Common stock | $ |
| Preferred stock | $ |
| Bonds | $ |
|  | |

|  |  |
| --- | --- |
| **1b.** | On which investment did Anita earn a 22% rate of return? |
|  |  |
|  | |  |  | | --- | --- | |  | Common stock | |  | Preferred stock | |  | Bonds | |  | None | |

|  |  |
| --- | --- |
| **2.** | Considering all three investments together, did Anita earn a 22% rate of return? |
|  |  |
|  | |  |  | | --- | --- | |  | Yes | |  | No | |

|  |  |
| --- | --- |
| **3.** | Anita wants to use the $233,000 proceeds ($160,000 + $14,000 + $59,000 = $233,000) from sale of the securities to open a fast-food franchise under a 10-year contract. What net annual cash inflow must the store generate for Anita to earn a 12% return over the 10-year period? Assume that the project will yield same annual cash inflow each year. Anita will not receive back her original investment at the end of the contract. **(Round discount factor(s) to 3 decimal places, other intermediate calculations and final answer to the nearest whole dollar.)** |

|  |  |
| --- | --- |
| Annual net cash inflow | $ |