# PROBLEM 1

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| The Heritage Amusement Park would like to construct a new ride called the Sonic Boom, which the park management feels would be very popular. The ride would cost $450,000 to construct, and it would have a 10% salvage value at the end of its 15-year useful life. The company estimates that the following annual costs and revenues would be associated with the ride: (Ignore income taxes.) |

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| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
| Ticket revenues |  |  |  | $ | 250,000 |  |
| Less operating expenses: |  |  |  |  |  |  |
| Maintenance | $ | 40,000 |  |  |  |  |
| Salaries |  | 90,000 |  |  |  |  |
| Depreciation |  | 27,000 |  |  |  |  |
| Insurance |  | 30,000 |  |  |  |  |
|  |  |  |  |  |  |  |
| Total operating expenses |  |  |  |  | 187,000 |  |
|  |  |  |  |  |  |  |
| Net operating income |  |  |  | $ | 63,000 |  |
|  |  |  |  |  |  |  |
|  | | | | | | |



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| Compute the pay back period associated with the new ride. |

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| Payback period | years |

**I computed 4.5 years which was wrong. How did you calculate? Should it be rounded to 5 years?**

# PROBLEM 2

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| Sharp Company has $15,000 to invest. The company is trying to decide between two alternative uses of the funds as follows: |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Invest in Project A | | Invest in Project B | |
| Investment required | $ | 15,000 | $ | 15,000 |
| Annual cash inflows | $ | 4,000 | $ | 0 |
| Single cash inflow at the end of 10 years |  |  | $ | 60,000 |
| Life of the project | 10 years | | 10 years | |
|  | | | | |

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| Sharp Company uses a 16% discount rate. (Ignore income taxes.) |
| **Required:** |

|  |  |
| --- | --- |
| **a.** | Determine the net present value. **(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 |
| Project A | $ |
| Project B | $ |
|  | |

**What I have for project A is correct. I calculated -1206 for project B and that was wrong.**

# PROBLEM 3

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| Wriston Company has $300,000 to invest. The company is trying to decide between two alternative uses of the funds. The alternatives are as follows: |

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| --- | --- | --- | --- | --- |
|  | A | | B | |
| Cost of equipment required | $ | 300,000 | $ | 0 |
| Working capital investment required | $ | 0 | $ | 300,000 |
| Annual cash inflows | $ | 80,000 | $ | 60,000 |
| Salvage value of equipment in seven years | $ | 20,000 | $ | 0 |
| Life of the project |  | 7 years |  | 7 years |
|  | | | | |

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| The working capital needed for project B will be released for investment elsewhere at the end of seven years. Wriston Company uses a 20% discount rate. (Ignore income taxes.) |

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| **Required:** |

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| **a.** | Calculate net present value for each project. **(Negative amounts should be indicated by a minus sign. Leave no cells blank - be certain to enter "0" wherever required. Round discount factor(s) to 3 decimal places, other intermediate calculations and final answers to the nearest whole dollar.)** |

|  |  |
| --- | --- |
|  | Net Present Value |
| Project A | $ |
| Project B | $ |

**I am lost on this one. Both of my answers above are wrong. I applied the cash inflows against the outflows (both cases it was -300,000) and my above answers are incorrect. Additionally, on project A, I discounted the cash-flow of 20K in the 7th year.**

# PROBLEM 4

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| On January 2, Fred Critchfield paid $18,000 for 900 shares of the common stock of Acme Company. Mr. Critchfield received an $0.80 per share dividend on the stock at the end of each year for four years. At the end of four years, he sold the stock for $22,500. Mr. Critchfield has a goal of earning a minimum return of 12% on all of his investments. (Ignore income taxes.) |
| **Required:** |

|  |  |
| --- | --- |
| **a.** | Determine the net present value. **(Negative amount should be indicated by a minus sign.Round discount factor(s) to 3 decimal places, other intermediate calculations and final answer to the nearest whole dollar.)** |

|  |  |
| --- | --- |
| Net present value | $ |

**This answer is also wrong. But then again, what is the discount rate? Do I also discount the $22,500 at the end of four years? Help!?**