Ciraulo recently acquired a machine at a cost of $64,000. It will be depreciated on a straight-line basis over eight years with no estimated salvage value. Ciraulo estimates that this machine will produce an annual net cash inflow of $13,000. Assuming an income tax rate of 50%, what is the approximate payback period?

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | 3.6 years | **b**. | 4.92 years | **c.** | 7.1 years | **d.** | 12.8 years | **e.** | Other |

The Apple Company is considering a capital budgeting proposal that will have an initial investment of $30,000.   
It would be depreciated on a straight-line basis over six years with no salvage value. The before tax annual cash flow due to this investment is **$12,000**, and the income tax rate is 40% paid in the same year as incurred. The desired rate of return is 15%. All cash flows occur at the end of the year. What is the after-tax accounting rate of return?

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | 14% | **b**. | 16-2/3% | **c.** | 26-2/3% | **d.** | 33-1/3% | **e.** | 10% |

On January 1, Waxhaw Inc. purchased for **$500,000** a new machine with a useful life of 8 years and no salvage value. The machine will be depreciated using the straight-line method and it is expected to produce annual cash flow from operations of $100,000. Waxhaw uses a time adjusted rate of return of 8%. What is the net present value?

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | $ 36,680 | **b**. | 54,664 | **c.** | $12,490 | **d.** | $71,000 | **e.** | $74,664 |

Neu Co. is considering the purchase of an investment that has a negative net present value when using Neu’s 12% hurdle rate. The internal rate of return would be

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | 0 | **b**. | 12% | **c.** | >12% | **d.** | <12% | **e.** | Other |

**The next four questions** are based on the following:

Ram Co. is negotiating for the purchase of equipment that would cost $100,000, with the expectation that $25,000 per year could be saved in after‑tax cash costs if the equipment were acquired. The equip­ment's estimated useful life is 10 years, with no resid­ual value, and would be depreciated by the straight-­line method. Ram's cost of capital is 12%. You need copy of interest tables for this problem.

The net present value is

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | $ 41,255 | **b.** | $ 6,440 | **c.** | $12,200 | **d.** | $13,000 | **e.** | Other |  |

The payback period is:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | 4.0 years. | **b.** | 4.4 years. | **c.** | 4.5 years. | **d.** | 5.0 years | **e.** | Other |  |

The accrual accounting rate of return based on initial investment is:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | 20% | **b.** | 15% | **c.** | 12% | **d.** | 10% | **e.** | Other |  |

In estimating the internal rate of return, the fac­tors in the table of present values of an annuity should be taken from the columns closest to the following multiple.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | 0.65 | **b.** | 4.00 | **c.** | 5.00 | **d.** | 5.65 | **e.** | Other |  |

Scott is considering investing **$140,000** in ten-year project. Scott estimates that the annual cash inflow, net of income taxes, from this project will be $20,000. Scott's desired rate of return on investment of this type is 10%. Information on present value factors is as follows:

|  |  |  |
| --- | --- | --- |
|  | **At 10%** | **At 12%** |
| P V of $1 for ten periods | 0.368 | 0.322 |
| P V of an annuity of $1 for ten periods | 6.145 | 5.650 |

Scott's expected rate of return on this investment is:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **a.** | Less than 10%, but more than 0% | **b.** | 10%. |  |
| **c.** | Less than 12%, but more than 10%. | **d.** | 12%. |
| **e.** | More than 12% |  |  |

On January 1, 2016, Cooper bought a building for $1,000,000. Cooper does not make a down payment. The purchase agreement requires Cooper to pay $125,000 on December 31 of each year, starting on December 31, 2016. The agreement provides that each payment will include interest at the rate of 10% compounded annually, and a principal payment. How many annual payments (approximate) will be required to pay off this debt?

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | 12 | **b**. | 13 | **c.** | 15 | **d.** | 17 | **e.** | 19 |