ISE307 Engineering Economic Analysis

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| --- | --- | --- |
| Factor Notation | Formula | Cash Flow Diagram |
|  |  | 0 1 2 3 … N P F |
|  |  |
|  |  | 0 1 2 3 … N A A A … A F |
|  |  |
|  |  |  0 1 2 3 … N  A A A … A PF |
|  |  |
|  |  |  0 1 2 3 … N  0 G 2G …. PF |
|  |  |
|  |  |  0 1 2 3 … N  A1 A2 A3 …. AN PF |
|  |  |  |
|  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MACRs Depreciation Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| year | 3200%DB | 5200%DB | 7200%DB | 10200%DB | 15150%DB | 20150%DB |
| 1 | 33.33 | 20.00 | 14.29 | 10.00 | 5.00 | 3.75 |
| 2 | 44.45 | 32.00 | 24.49 | 18.00 | 9.50 | 7.219 |
| 3 | 14.81 | 19.20 | 17.49 | 14.40 | 8.55 | 6.677 |
| 4 |  7.41 | 11.52 | 12.49 | 11.52 | 7.70 | 6.177 |
| 5 |  | 11.52 |  8.93 |  9.22 | 6.93 | 5.713 |
| 6 |  |  5.76 |  8.92 |  7.37 | 6.23 | 5.285 |
| 7 |  |  |  8.93 |  6.55 | 5.90 | 4.888 |
| 8 |  |  |  4.46 |  6.55 | 5.90 | 4.522 |
| 9 |  |  |  |  6.56 | 5.91 | 4.462 |
| 10 |  |  |  |  6.56 | 5.90 | 4.462 |
| 11 |  |  |  |  3.26 | 5.91 | 4.461 |
| 12 |  |  |  |  | 5.90 | 4.462 |
| 13 |  |  |  |  | 5.91 | 4.461 |
| 14 |  |  |  |  | 5.90 | 4.462 |
| 15 |  |  |  |  | 5.91 | 4.461 |
| 16 |  |  |  |  | 2.95 | 4.462 |
| 17 |  |  |  |  |  | 4.461 |
| 18 |  |  |  |  |  | 4.462 |
| 20 |  |  |  |  |  | 4.461 |
| 21 |  |  |  |  |  | 2.231 |

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| **US Corporate Tax Schedule**

|  |  |  |
| --- | --- | --- |
| Taxable income | Tax Rate | Tax Computation |
| 0-$50,000 | 15% | $0+0.15 Δ |
| 50,001-75,000 | 25% | $7500+0.25 Δ |
| 75,001--100,000 | 34% | $13,750+0.34 Δ |
| 100,001-335,000 | 39% | $22,250+0.39 Δ |
| 335,001-10,000,000 | 34% | $113,900+0.34 Δ |
| 10,000,001-15,000,000 | 35% | $3,400,000+0.35 Δ |
| 15,000,001-18,333,333 | 38% | $5,150,000 + 0.38 Δ |
| 18,333,334 and up | 35% | $6,416,666 + 0.35 Δ |

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