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 | 3  200%  DB | 5  200%  DB | 7  200%  DB | 10  200%  DB | 15  150%  DB | 20  150%  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 | |
| **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 | |