

ABC Company purchased a machine for \$195,000. The machine is expected to last for five years and then be sold for \$27,300. It has been rated to produce 120,000 units over its life and the actual units produced were as follows:

Year of Production	Number of Units Produced
1	16,800
2	26,400
3	24,000
4	22,800
5	30,000

**Required:**

Prepare a calculation to show the annual amortization based on the following independent assumptions:

- a) Straight Line Method
- b) Units of Production Method
- c) Double Declining Balance Method

NOTE: Do not round the per unit amortization.  
Round the amortization expense to the nearest dollar

**Working Paper**

Straight Line:

Cost	
Estimated Salvage Value	
Maximum Accumulated Amortization	
Life in Years	
Annual Amortization	

Units of Production:

Cost	
Estimated Salvage Value	
Maximum Accumulated Amortization	
Maximum Units	
Amortization per Unit	

Double Declining:

100 Percent	
Life in Years	
Single Declining Rate	
Times Two	
Double Declining Rate	

Year	Beginning Net Book Value	Rate	Amortization	Ending Net Book Value
1				
2				
3				
4				
5				

Accumulated Amortization Amounts:

Year	Straight Line	Units of Production	Double Declining
1			
2			
3			
4			
5			
<b>Total</b>			

**Answer**

Straight Line:

Cost	195,000
Estimated Salvage Value	27,300
Maximum Accumulated Amortization	167,700
Life in Years	5
Annual Amortization	33,540

Units of Production:

Cost	195,000
Estimated Salvage Value	27,300
Maximum Accumulated Amortization	167,700
Maximum Units	120,000
Amortization per Unit	\$1.3975

Double Declining

100 Percent	100%
Life in Years	5
Single Declining Rate	20%
Times Two	2
Double Declining Rate	40%

Year	Beginning Net Book Value	Rate	Amortization	Ending Net Book Value
1	195,000	40%	78,000	117,000
2	117,000	40%	46,800	70,200
3	70,200	40%	28,080	42,120
4	42,120	40%	* 14,820	27,300
5	27,300	40%	* 0	27,300

Accumulated Amortization Amounts:

Year	Straight Line	Units of Production	Double Declining
1	33,540	23,478	78,000
2	33,540	36,894	46,800
3	33,540	33,540	28,080
4	33,540	31,863	14,820
5	33,540	41,925	0
<b>Total</b>	<b>167,700</b>	<b>167,700</b>	<b>167,700</b>

\* Net Book Value can not go below the Estimated Salvage Value