

ABC Company purchased a machine for \$72,000. The machine is expected to last for five years and then be sold for \$7,200. It has been rated to produce 180,000 units over its life and the actual units produced were as follows:

Year of Production	Number of Units Produced
1	30,000
2	33,000
3	36,000
4	31,500
5	39,500

**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	72,000
Estimated Salvage Value	7,200
Maximum Accumulated Amortization	64,800
Life in Years	5
Annual Amortization	12,960

Units of Production:

Cost	72,000
Estimated Salvage Value	7,200
Maximum Accumulated Amortization	64,800
Maximum Units	180,000
Amortization per Unit	\$0.36

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	72,000	40%	28,800	43,200
2	43,200	40%	17,280	25,920
3	25,920	40%	10,368	15,552
4	15,552	40%	6,221	9,331
5	9,331	40%	* 2,131	7,200

Accumulated Amortization Amounts:

Year	Straight Line	Units of Production	Double Declining
1	12,960	10,800	28,800
2	12,960	11,880	17,280
3	12,960	12,960	10,368
4	12,960	11,340	6,221
5	12,960	14,220	2,131
<b>Total</b>	<b>64,800</b>	<b>61,200</b>	<b>64,800</b>

\* Can not be \$9,331 times 40% (\$3,732.40) as this would go beyond the Maximum Accumulated Amortization.