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ROI: Return on investment (ROI) is a ratio between net income (over a period) and investment (costs resulting from an investment of some resources at a point in time). A high ROI means the investment's gains compare favourably to its cost. As a performance measure, ROI is used to evaluate the efficiency of an investment or to compare the efficiencies of several different investments.[1] In economic terms, it is one way of relating profits to capital invested. The formula of ROI is,

$$\text{ROI} = \frac{\text{Total Benefits} - \text{Total Costs}}{\text{Total Costs}}$$

BEP: The Break-Even Point (BEP) in economics, business—and specifically cost accounting—is the point at which total cost and total revenue are equal, i.e. "even". There is no net loss or gain, and one has "broken even", though opportunity costs have been paid and capital has received the risk-adjusted, expected return. The formula of BEP is,

$$\text{BEP} = \begin{array}{c} \text{Number of} \\ \text{years of} \\ \text{negative} \\ \text{cash flow} \end{array} + \frac{\text{That year's Net Cash Flow} - \text{That year's Cumulative Cash Flow}}{\text{That year's Net Cash Flow}} \quad \text{(In the year in which Cumulative Cash Flow turns positive):}$$

NPV: The Net Present Value(NPV) applies to a series of cash flows occurring at different times. The present value of a cash flow depends on the interval of time between now and the cash flow. It also depends on the discount rate. NPV accounts for the time value of money. We need to calculate the NPV to determine if a project is economically feasible or not. As long as the NPV is greater than zero, the project is considered economically acceptable. The formula of NPV is,

$$\text{NPV} = \sum \text{PV of Total Benefits} - \sum \text{PV of Total Costs}$$

PV: The formula of NPV is,

$$\text{PV} = \frac{\text{Cash flow amount}}{(1 + \text{rate of return})^n} \quad \text{where } n \text{ is the year in which the cash flow occurs.}$$

Find ROI, BEP, and NPV of this table :

	Year 0 (2012)	Year 1 (2013)	Year 2 (2014)	Year 3 (2015)	Year 4 (2016)	Year 5 (2017)	Total
Benefits							
Increased sales		500,000	530,000	561,800	595,508	626,000	2,813,308
Reduction in customer complaint calls		70,000	70,000	70,000	70,000	70,000	350,000
Reduced inventory costs		68,000	68,000	68,000	68,000	68,000	340,000
Total Benefits		638,000	668,000	699,800	733,508	764,000	3,503,308
PV of Total Benefits		601,887	594,518	587,566	581,007	570,905	2,935,883
Development Costs							
2 servers @ 125,000	250,000	0	0	0	0	0	250,000
Printer	100,000	0	0	0	0	0	100,000
Software licenses	34,825	0	0	0	0	0	34,825
Server software	10,945	0	0	0	0	0	10,945
Development labor	1,236,525	0	0	0	0	0	1,236,525
Total Development Costs	1,632,295	0	0	0	0	0	1,632,295
Operational Costs							
Hardware		50,000	50,000	50,000	50,000	50,000	250,000
Software		20,000	20,000	20,000	20,000	20,000	100,000
Operational labor		115,000	119,600	124,384	129,359	134,444	622,787
Total Operational Costs		185,000	189,600	194,384	199,359	204,444	972,787
Total Costs	1,632,295	185,000	189,600	194,384	199,359	204,444	2,605,082
PV of Total Costs	1,632,295	174,528	168,743	163,209	157,911	152,772	2,449,458
Total Benefits – Total Costs	[1,632,295]	453,000	478,400	505,416	534,149	559,556	898,226
Cumulative Net Cash Flow	[1,632,295]	[1,179,295]	[700,895]	[195,479]	338,670	898,226	

$$\text{So, ROI} = \frac{3,503,308 - 2,605,082}{2,605,082} = 0.344$$

$$\text{So, BEP} = 3 + \frac{534,149 - 338,670}{338,670} = 3.577$$

$$\text{So, NPV} = 2,935,883 - 2,449,458 = 486,425$$