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Keywords	Formulas
Schedule Performance Index (SPI)	A) SPI = EV/PV EV = Earned Value PV = Planned Value B) < 1 Project is behind schedule = 1 Project is on schedule > 1 Project is ahead of schedule
Cost Performance Index (CPI)	A) CPI = EV/AC EV = Earned Value AC = Actual Cost B) < 1 Over budget = 1 On budget > 1 Under budget
Schedule Variance (SV)	A) SV = EV - PV EV = Earned Value PV = Planned Value B) Negative - Behind schedule Zero - On schedule Positive - Ahead of schedule
Cost Variance (CV)	A) CV = EV - AC EV = Earned Value AC = Actual Cost B) Negative - Over budget Zero - On budget Positive - Under budget
Estimate at Completion (EAC) future performance = past performance	EAC = (BAC/CPI) BAC = Budget at completion CPI = Cost performance index
Estimate at Completion (EAC) when original estimates are flawed	E EAC=AC + bottom-up ETC ETC = reestimate
Estimate at Completion (EAC)) when variances are typical	EAC= AC + (BAC-EV)/(CPI*SPI) or EAC= AC + (BAC-EV)/CPI CPI = future CPI, SPI = future SPI
Estimate at Completion (EAC)) when variances are atypical	EAC= AC + (BAC-EV) or EAC= BAC -CV
Estimate to Complete (ETC)	ETC = EAC - AC
Percent Complete	EV / BAC * 100
VAC (Variance at Completion)	BAC - EAC
Number of Communication Channels	N(N-1)/2 Where N = Number of project team members
Expected Value (EV) or PERT Estimation	(O+4M+P)/6 O= Optimistic estimate M= Most Likely estimate P= Pessimistic estimate

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Keywords	Formulas
To-Complete Performance Index (TCPI) based on the BAC	TCPI = (BAC - EV) / (BAC - AC) BAC = Budget at completion AC = Actual cost EV = Earned value
To-Complete Performance Index (TCPI) based on the EAC	TCPI = (BAC - EV) / (EAC - AC) BAC = Budget at completion AC = Actual cost EV = Earned value EAC = Estimate at completion
Total Float (or) Total Slack	LS-ES (or) LF-EF LS = Late start ES = Early start LF = Late finish EF = Early finish
Standard Deviation of a Task	(P-O)/6 P = Pessimistic estimate O = Optimistic estimate
Present Value (PV)	PV = FV/(1 + r/100)n N = Number of years r = Discount rate
Net Present Value (NPV)	The higher the better
Internal Rate of Return (IRR)	The higher the better
The Payback Period	The lower the better
The Life Cycle Cost	The lower the better
The Benefit to Cost Ratio (BCR)	The higher the better
Critical Path	Path with longest duration
Rough Order of Magnitude (ROM) Estimate	Estimated value + or - 50%
Task Variance	(Standard Deviation) * (Standard Deviation)
PTA (Point of Total Assumptions)	((Ceiling Price - Target Price) / Buyer's Share Ratio) + Target Cost
Mathematical Basics	Average (Mean) = Sum of all members divided by the number of items. Median = Arrange values from lowest value to highest. Pick the middle one. If there is an even number of values, calculate the mean of the two middle values. Mode = Find the value in a data set that occurs most often.
EMV (Expected Monetary Value)	Probability * Impact in currency