Summary of Key Formulas Used

Knowledge Area	Theme	Formula
Time Management	Project Scheduling	• ES of a successor activity = Max (EF) of its predecessor activities, adjusted by any constraints • EF = ES + Activity Duration • LF of a predecessor activity = Min(LS) of its successor activities, adjusted by any constraints • LS = LF-Activity Duration • Total Float = LS – ES (or) LF-EF
	Free Float	• Min (ESs of Succeeding activities) – EF of Current activity
	PERT estimates	• PERT duration mean = $(O + 4*M + P) / 6$ • Standard Deviation = $(P – O) / 6$ • Variance = $((P-O)/6)**2$
Cost Management	Earned Value	• CV=EV-AC • CPI = EV/AC • SV = EV-PV • SPI = EV/PV
	Earned Value - Forecasts	• EAC = AC + ETC • EAC (Atypical) = AC + (BAC-EV) – assuming original estimate were correct. • EAC (Typical) = BAC/CPI (assuming the same cost spending efficiency will continue in future as well) • EAC (Typical)= AC +((BAC-EV)/(CPI * SPI)) (if both CPI and SPI have to be taken into consideration) • VAC=BAC-EAC • VAC – ((BAC-EAC)/BAC)*100 % • TCPI (Using BAC) = (BAC-EV)/(BAC-AC) • TCPI (Using EAC) = (BAC-EV)/(EAC-AC)
	Return on Investment (ROI)	• Average Rate of Return = (Average Annual Profit/Total Investment)*100
	Present Value (PV) of an Investment	• PV = $(FV)/((1+r)**n)$ – where FV = Projected Future value of the investment after "n" years and "r" is the rate of interest per annum
	Net Present Value (NPV)	• NPV = PV_I- PV_E Where - PV_I is the PV of Income stream across the lifecycle of the Product and PV_E is the PV of the Expense Stream across the lifecycle of the Product. This can also be calculated as $PV_{(I-E)}$, where (I-E) is the Net Income across the lifecycle of the Product
Communications Management	# of communications channels	• $(n*(n-1))/2$ – for an n member team

Summary of Key Formulas Used

Risk Management	Risk Exposure (Score)	• Risk Exposure = P*I P = Probability, I = Impact
	Expected Monetary Value	• EMV = P*Outcome P = Probability, O = Outcome