



Formulas to Know for the Exam

Although we do not suggest you memorize a lot of information to prepare for the exam, the following formulas are some of the items you do need to memorize, as well as understand. There will not be a lot of questions requiring you to use these formulas, but it will be helpful to be able to apply these at a moment's notice. If you are not comfortable with math, you should be happy to hear that you can know none of these formulas and still pass the exam! The most important formulas are those relating to earned value, as earned value is a key component of monitoring and controlling.

Formulas to Know for the Exam		
Title	Formula	PMP® Exam Prep Chapter Reference
Present Value (PV)	$PV = \frac{FV}{(1 + r)^n}$	Integration Management
Expected Activity Duration (Triangular Distribution)*	$\frac{P + M + O}{3}$	Time Management
Expected Activity Duration (Beta Distribution)*	$\frac{P + 4M + O}{6}$	Time Management
Beta Activity Standard Deviation (SD)*	$\frac{P - O}{6}$	Time Management
Range of an activity duration*	Beta EAD +/- SD	Time Management
Total float	LS - ES, or LF - EF	Time Management
Cost Variance (CV)	EV - AC	Cost Management
Schedule Variance (SV)	EV - PV	Cost Management
Cost Performance Index (CPI), or Cumulative CPI (CPI ^c)	$\frac{EV}{AC} \text{ or } \frac{EV^c}{AC^c}$	Cost Management
Schedule Performance Index (SPI)	$\frac{EV}{PV}$	Cost Management
Estimate at Completion (EAC)	AC + Bottom-up ETC	Cost Management
Estimate at Completion (EAC)	$\frac{BAC}{CPI^c}$	Cost Management
Estimate at Completion (EAC)	AC + (BAC - EV)	Cost Management
Estimate at Completion (EAC)	$AC + \frac{(BAC - EV)}{(CPI^c \times SPI^c)}$	Cost Management
To-Complete Performance Index (TCPI)	$\frac{(BAC - EV)}{(BAC - AC)}$	Cost Management
Estimate to Complete (ETC)	EAC - AC	Cost Management
Variance at Completion (VAC)	BAC - EAC	Cost Management
Communication channels	$\frac{N(N - 1)}{2}$	Communications Management
Expected Monetary Value	EMV = P × I	Risk Management
Point of Total Assumption (PTA)	$\frac{\text{Ceiling price} - \text{Target price}}{\text{Buyer's share ratio}} + \text{Target cost}$	Procurement Management

*Remember that these formulas can be used for costs as well as activity durations.