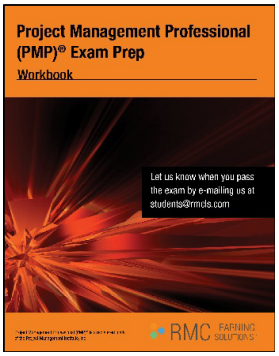
RMC LEARNING SOLUTIONS™

Project Management Professional Exam Prep (PMP)®

Workbook



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Note: Cut out the 3 exercise cards on page 54

Contact Us With Questions and When You Pass

Contact Us with Questions: students@rmcls.com

We have set up a special e-mail address only for students of RMC's Project Management Professional (PMP)® Exam Prep course. Please do not give it to others or use it for general questions. To better be able to help you, please provide the following information in addition to your question:

1. A day and evening phone number
2. The date and city of the course you took
3. The name of your instructor
4. The time zone you are in
5. Note if you are taking the exam within a very short period of time

Contact Us When You Pass the Exam: students@rmcls.com

Please let us know so that we can celebrate with you. We need to know when you pass the exam! Simply e-mail us at students@rmcls.com with the following information:

1. Hours studied
2. Your overall score (pass/fail) and scores for each process group (proficient, moderately proficient, below proficient)
3. Feedback
   a. What was harder than you expected?
   b. What was easier than you expected?
   c. Where should you have studied more?
   d. Where should we spend more time in course?
   e. How can we improve this course?
4. In addition, please fax us your test results at (952) 846-4844. This is allowable per PMI.

Don't Make the Common Mistakes: students@rmcls.com

Contact RMC if:

1. You did not score 75% the second time you used PM FASTrack®
2. You are going to study much more than 40 hours
3. You fail the exam (as soon as you can)

Course Outline

Day One:

- Introduction
- Project Management Framework
- Project Management Processes
- Questions With More Than One Right Answer
- Stakeholder Management
- Integration Management
- Scope Management
- Quality Management
- Communications Management

Day Two:

- Questions from Day 1
- Resource Management
- Schedule Management
- Procurement Management
- Risk Management
- Cost Management
- Professional and Social Responsibility
- How to Take the Exam
- Next Steps

For a More Productive Tomorrow ...

- Read and take notes from:
  - — Article: Earned Value Project Management ... An Introduction (Workbook)
  - — Article: Ethics and Professional Responsibility for International Business (Workbook)
  - — Earned Value Measurement section, *PMP® Exam Prep* book, Pages 293-297
- Do the earned value exercise
  - — The Fence #1, *PMP® Exam Prep* book, Page 298

Gaps

Gaps in my project management knowledge: What don't I know? What don't I do?

Gap	Don't Know	Don't Do

Gaps

Gaps in my project management knowledge: What don't I know? What don't I do?

Gap	Don't Know	Don't Do

Gaps

Gaps in my project management knowledge: What don't I know? What don't I do?

Gap	Don't Know	Don't Do

Notes/Questions for Instructor

Course Score Sheet

Topic	Topic	Topic	Topic	Topic	Topic	Topic	Topic
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10
Score	Score	Score	Score	Score	Score	Score	Score

Select Content Areas For the Exam
(from each section of slides as presented in RMC's course)

Project Management Framework
Select Concept Areas for the exam:

- Definition of a project and a program
- How organizational structures influence projects
- Managing under different forms of organizational structures
- Project roles
- Project constraints

Project Management Processes
Select Concept Areas for the exam:

- Differentiate between project life cycles and the project management process
- Initiate, plan, execute, monitor and control, and close a project
- Use a standard process for managing projects that might be different from your real world
- Identify the process group where each process belongs

Integration Management
Select Concept Areas for the exam:

- Have the right attitude as a project manager
  - Plan before you act
  - Act according to the plan
  - Be of service to the team
- Understand what goes on during project selection
- Initiate, plan, execute, monitor and control, and close a project using PMI best-accepted practices
- Create and use a project charter the PMI way
- Create a project management plan with realistic baselines
- Create a project management plan including management plans for individual knowledge areas
- Perform integrated change control using baselines
- Gain formal acceptance of deliverables
- Update lessons learned
- Index and archive records

Note: This list does not include all exam-related content but highlights the areas we choose to emphasize for instructor guidance in addition to what's in the *PMP® Exam Prep* book.

Stakeholder Management
Select Concept Areas for the exam:

- Identify all stakeholders, the earlier the better
- Use stakeholders to help you define, plan, manage, and control a project
- Measure, analyze, and evaluate stakeholder engagement and create plans to move them to desired engagement levels
- Actively engage with stakeholders according to plan

Scope Management
Select Concept Areas for the exam:

- Understand product scope and project scope
- Determine, analyze, prioritize, and manage requirements
- Determine what is and is not included in the project
- Define scope completely and clearly
- Create and use a WBS
- Create a scope baseline
- Obtain formal change requests
- Evaluate if requested changes fall within scope
- Control scope from being gold plated

Quality Management
Select Concept Areas on the Exam:

- Apply the project manager's role in quality
- Apply what happens in each quality process
- Understand quality tools and when is each used

Communications Management
Select Concept Areas for the exam:

- Use a formal communications management plan
- Communicate
  - Exchange information according to the plan
  - Disseminate reports (reporting should be a minor activity vs. your entire focus)
- Monitor communications to plan

-Continued

Select Content Areas for the Exam (Continued)
(from each section of slides as presented in RMC's course)

Resource Management
Select Concept Areas for the exam:

- Understand resource responsibilities for project managers
- Estimate activity resources for type and quantity necessary
- Create recognition and reward systems to engage and motivate team members
- Use interpersonal and team building skills to gain the cooperation of team members
- Manage people in a matrix environment
- Continually confirm resource availability
- Manage the project management team
- Track team member performance
- Control resources and update project management documents

Schedule Management
Select Concept Areas for the exam:

- Work the process of scheduling a large project
- Estimate time accurately
- Draw network diagrams manually
- Manage the critical path
- Manage float
- Compress the schedule
- Keep project in line with the schedule baseline

Procurement Management
Select Concept Areas for the exam:

- Be involved in the procurement process
- Manage the procurement process
- Select the right contract types
- Manage a project under the different types of contracts
- Evaluate what is and what is not in the contract
- Control changes to contracts

Risk Management
Select Concept Areas for the exam:

- Take advantage of opportunities and threats
- Manage risk like an expert
- Focus on prevention of problems
- Mange a project assuming you have done risk management
- Use risk management to decrease cost and time
- Calculate and manage reserves

Cost Management
Select Concept Areas for the exam:

- Plan how you will estimate cost and develop the budget
- Plan ahead how you will manage cost
- Create and manage reserves
- Calculate and manage with earned value
- Calculate formulas

Professional and Social Responsibility
Select Concept Areas for the exam:

- Apply project management ethically
- Apply PMI's "*Code of Ethics and Professional Conduct"*
- Pick the ethical response

Course Slides: Identify Your Gaps

Identify Your Gaps (Project Management Processes)

Review Rita's Process Chart:

- How would your project management **skills** be different if you followed this process with every project?
- How can you "imagine" yourself following this process while preparing for the exam?

Review this section

Add to your Gaps Sheet

1

Identify Your Gaps (Integration Management)

Reflect: In your current projects, do you have predetermined areas of measurement and acceptable ranges to determine the project is on schedule and budget?

- Yes: How closely do they match the process outlined in this chapter? How will you adapt your studies to address this differently?
- No: How will you adapt your studies to address the process

Review this section

Add to your Gaps Sheet

2

Identify Your Gaps (Stakeholder Management)

Reflect:

- What information you need to identify **all** stakeholders early in the project. How do you obtain all of the information?
- How should you go about increasing stakeholder engagement?

Review this section

Add to your Gaps Sheet

3

Identify Your Gaps (Scope Management)

Reflect:

- Do you regularly complete a WBS as described? Will your real world affect how you study for the exam?
- Describe the difference between Validate Scope and Control Scope.

Review this section

Add to your Gaps Sheet

4

Identify Your Gaps (Quality Management)

Reflect:

- What are some strategies to keep the focus on quality during Executing?
- Think about the tools you use to control quality. What is missing from your skill set?

Review this section

Add to your Gaps Sheet

5

Identify Your Gaps (Communications Management)

Reflect:

- Are you planning your communications as completely as described?
- What impact would more planning have on your projects?

Review this section

Add to your Gaps Sheet

6

Course Slides: Identify Your Gaps (Continued)

Identify Your Gaps (Resource Management)

Review

- What motivation theory are you least familiar with?
- How are you currently controlling resources?

What are you currently **not** doing that may impact or affect your studying?

Review this section

Add to your Gaps Sheet

7

Identify Your Gaps (Procurement Management)

Discuss:

- What outputs of plan procurement management do you use on a regular basis?
- How will you study to better understand the outputs you do not use regularly?

Review this section

Add to your Gaps Sheet

8

Identify Your Gaps (Risk Management)

Review the risk chart in your Workbook

Any questions?

Review this section

Add to your Gaps Sheet

9

Identify Your Gaps (Cost Management)

Discuss: Currently, what are you **not** doing:

- When determining budgets?
- When controlling costs?

How will this affect your studying?

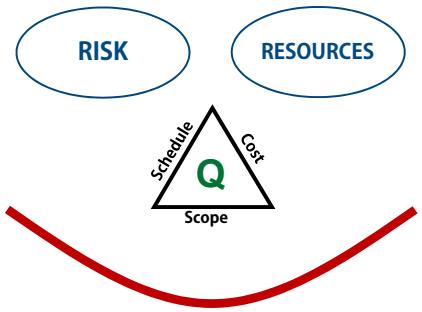
Review this section

Add to your Gaps Sheet

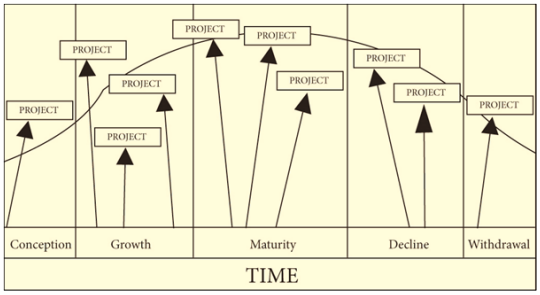
10

Course Slides Day 1

Project Constraints (Continued, Page 45-46, Slide in Workbook)

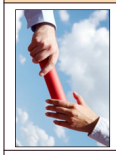
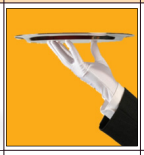


Product Life Cycle (Slide in Workbook)



2

Overview: Project Management Process (Slide in Workbook)

Initiating	Planning	Executing	Monitoring & Controlling	Closing
				
• Project manager creates project charter and it is issued by sponsor	Create a project management plan that is: • Bought into • Approved • Realistic • Formal	• Be of service to the team • Execute the work according to the plan • Implement only approved changes • Continuously improve	• Measure • Control to the project management plan • Approve or reject changes	• Index and archive records • Celebrate! • Formal acceptance

3

The Project Manager's Vow (Slide in Workbook)

"I will help pull everyone's needs together and plan this project to see if project objectives can be met. I will adjust stakeholder expectations and the project plan so they are realistic and achievable. Then, I will lead and facilitate the team's efforts, take corrective actions, and keep everyone focused to keep the project on track, or I will just fire myself!"

— Rita Mulcahy

Have the right attitude as a project manager!

4

Monitor and Control Project Work Involves: (Slide in Workbook)

exam tips

- Measuring
- Making up for delays to activities
- Crashing and fast tracking
- Looking for risk impacts of changes
- Determining what:
  - Preventive action is needed
  - Corrective action is needed

5

Consider Large Projects (Slide in Workbook)

Imagine how important managing expectations is for a large project

More people

More expectations

More documents

A -> C
X -> Y
F -> D

More changes

More potential impact of problems

6

-Continued

Course Slides Day 1 (Continued)

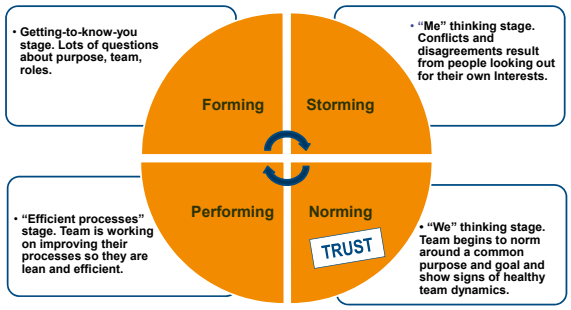
Monitor Communications (Slide in Workbook)

- Assess how project communications are going to ensure information is flowing as planned— in the right way, to right people, and at right time
- Follow processes detailed in the communications management plan
  - How to measure communication effectiveness and efficiency
- Measure to determine if:
  - Communications management plan is being followed
  - Communications are meeting stakeholders' needs

7

Course Slides Day 2

Develop Team Includes: (Pages 387, Slide in Workbook)

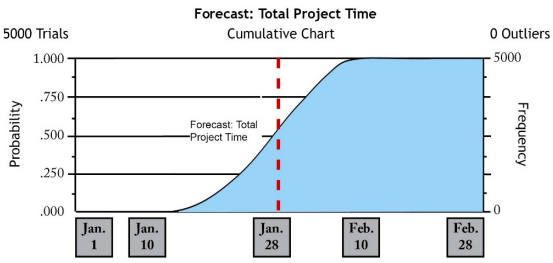


Tuckman's Model of Team Formation

Project Manager's Estimating Responsibility (Slide in Workbook)

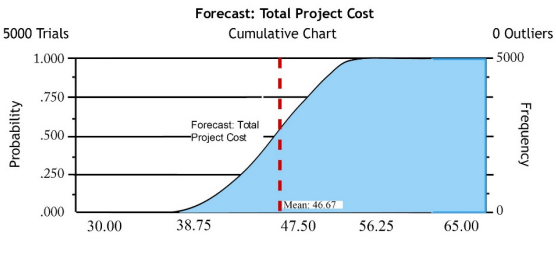
- Provide those doing the work/estimating with:
  - Historical information
  - WBS & WBS dictionary
  - Accuracy of estimates desired
  - Method to estimate desired
- Complete a sanity check of estimates
- Prevent padding
- Formulate a reserve *(more in Risk Management)*
- Record assumptions for later review
- Resource estimates

Monte Carlo for Time (Page 259, Slide in Workbook)



3

Monte Carlo for Cost (Page 259, Slide in Workbook)

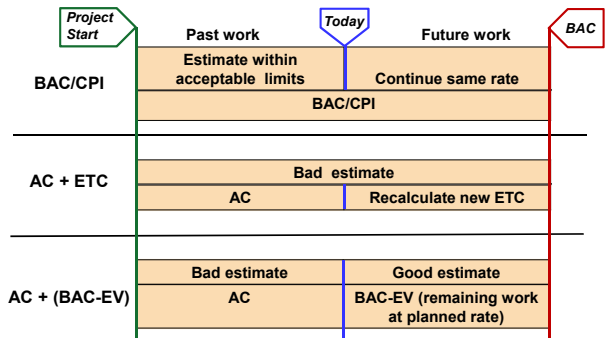


4

-Continued

Course Slides Day 2

Earned Value — EAC
(Page 295 & Slide in Workbook)



5

Overcoming Exam Pressure
(Slide in Workbook)

- Attack the exam; do not let it control you
- Read the question only once
- Mark about 30 to 50 questions
- Mark and skip questions relating to your gaps and return to them later
- Read all the choices
- Be prepared for more than one “right” answer
- Expect questions you cannot understand!
- Control your emotions
- Have a strategy for how you will take the exam

-Continued

Overcoming Exam Pressure
(Continued, Slide in Workbook)

What’s going on in your head?

- I’m not fast enough
- I will never get this
- I will fail
- Oh no, a formula question
- That other question still bugs me
- I am sure I got that other question wrong

Thoughts like these waste brain power and actually hurt you on the exam!

Common Fears That Are Not Realistic
(Slide in Workbook)

- Running out of time
- Having test anxiety/panic
- Remembering inputs & outputs
- Remembering the formulas

Use PM FASTrack® exam simulator to help!

RMC’s List: What You Should Be Worried About
(Slide in Workbook)

- Not following instructions on how to study
- Using PM FASTrack® more than twice before taking the exam
- Not understanding “large project” in PMI’s terms; not clearly understanding how that differs from your real-world projects
- Not wearing your “PMI hat”
- Not understanding your own test-taking tendencies

-Continued

RMC’s List: What You Should Be Worried About
(Continued, Slide in Workbook)

- Not making PM tools you don’t use “real” … try walking through creating and using them
- Not understanding what a project manager should do for each process
- Not expecting to see questions worded differently on the exam
- Not expecting to see questions you can’t understand

-Continued

Course Slides Day 2 (Continued)

RMC's List: What You Should Be Worried About
(Continued, Slide in Workbook)

- Not being able to answer most input or output questions without studying
- Thinking you can pass the exam without proper training and experience using project management tools
- Not being adequately prepared

When in doubt, call or e-mail RMC

Questions With More Than One "Right" Answer
(Slide in Workbook)

- Everyone has difficulty with questions with more than one "right" answer
- Practice looking for and addressing these in PM FASTrack®

Expect Confusing, Convoluted Wording
(Slide in Workbook)

- Just say to yourself, "Who wrote this thing?" Then mark it, and move on to the next question.
- Skip questions you cannot understand or don't know. Mark them, move on, and come back to them.
- Guess, if you must
  - Not answered = Wrong
  - Guess = 25% chance of being right

Important: Before Taking the Exam
(Slide in Workbook)

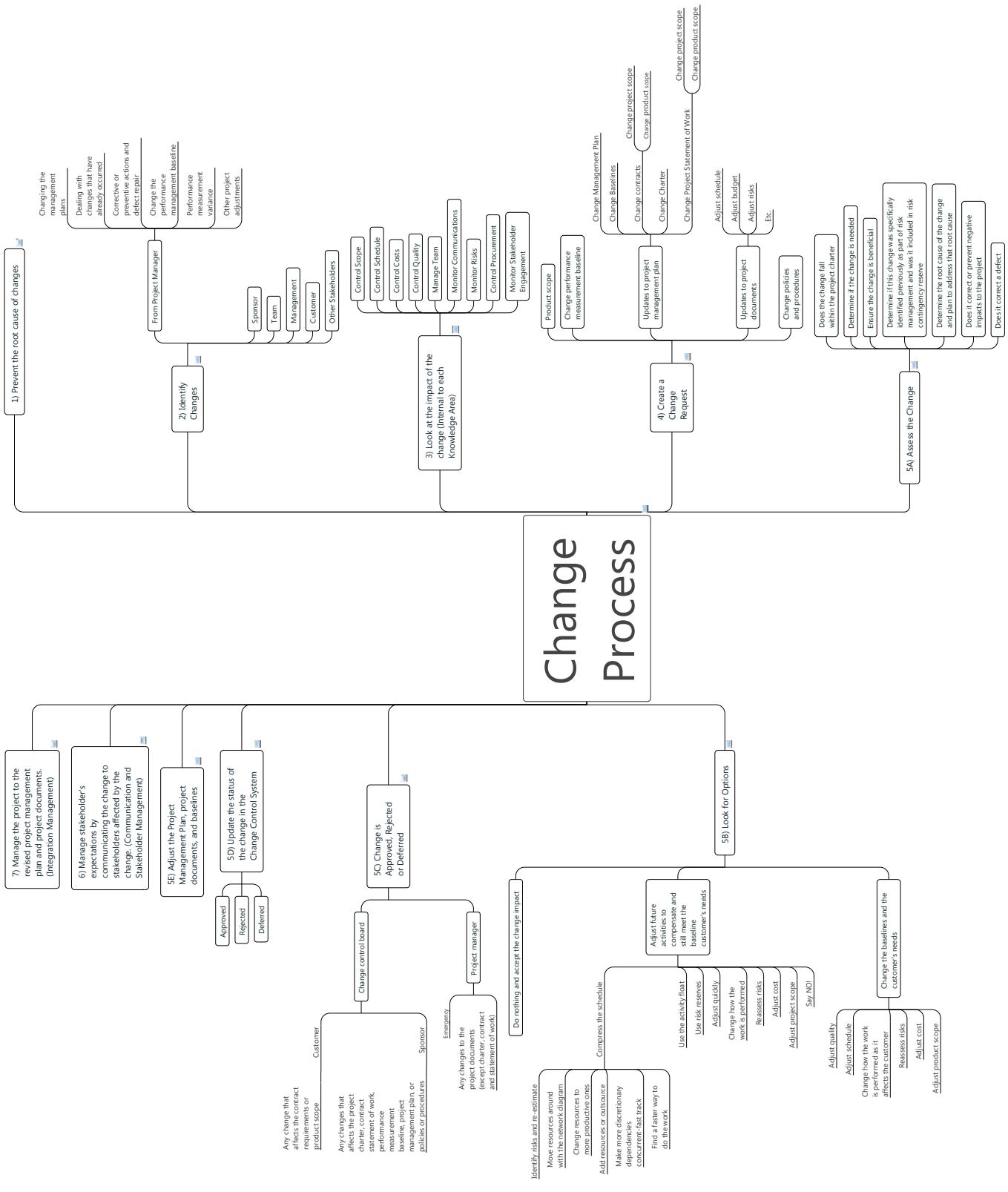
exam tips

This is only a summary:

- ❑ Create a study plan before you start to study
- ❑ Study no more than 40 hours
- ❑ Use PM FASTrack® exam simulator
- ❑ Use "Why I got a question wrong" to analyze and study to fill in your gaps.
- ❑ Use PM FASTrack® again if you did not score 75% the first time. Do not use it more than twice.
- ❑ Refer to "Why I got a question wrong" to fill gaps

Detailed Process for Making Changes

See *PMP Exam Prep*, Pages 162-163
for the text version.



Overcoming Exam Pressure

by Rita Mulcahy

Are you losing sleep worrying about taking the exam? Is your mind flooded with all sorts of "what-ifs" related to possible exam catastrophes? Well, did you know that thoughts like these can hinder your exam performance and can cause you to waste time overpreparing for the exam? Many of the fears you might be having are unrealistic and can be relieved through positive thinking and practicing your test-taking skills with RMC's PM FASTrack® Exam Simulator. Here are some things to think about to alleviate your test-taking fears.

Did you remember how to take the exam?

- Attack the exam; do not let it control you
- Read the question only once
- Mark about 30 to 50 questions
- Mark and skip questions relating to your gaps and return to them later
- Read all the choices
- Be prepared for more than one "right" answer
- Expect questions you cannot understand!!
- Control your emotions
- Have a strategy for how you will take the exam

What's going on in your head? Think about what is going on in your head while you take the exam. Are you saying things to yourself like the phrases listed below?

- I'm not fast enough
- I will never get this
- I will fail
- Oh no, a formula question
- That other question still bugs me
- I am sure I got that other question wrong

Thoughts like these waste brain power and actually hurt you on the exam!

Common fears that are not realistic:

Running out of time: Almost no one runs out of time. Practice your timing using PM FASTrack®. If you can complete the practice exams in less than three hours, you will not have a problem.

Having test anxiety/panic: Panic is a personal issue. If you think panic is a concern for you, make sure you simulate the actual exam in your mind when using PM FASTrack®. Take tests in a situation similar to the actual testing environment, for example, in a library.

Remembering inputs and outputs: Use Rita's Process Chart and realize that if you know project management, most inputs and outputs are just common sense.

Remembering the formulas: Most test takers report that there are only about four calculations on the exam. A majority of formulas on the exam are related to earned value. In most cases, if you take the exam within two months of taking RMC's PMP® Exam Prep course, you already know enough about earned value to answer most of those questions without any additional study.

-Continued

Overcoming Exam Pressure (Continued)

Though many fears you will have about taking the exam are unrealistic, there are some things you should be concerned about.

Here is Rita's list of what you should be worried about:

- Not following instructions on how to study
- Using **PM FASTrack®** more than twice before taking the exam
- Not understanding "large project" in PMI's terms; not clearly understanding how that differs from your real-world projects
- Not wearing your PMI hat
- Not understanding your own test-taking tendencies
- Not making the project management tools you don't use "real" ... try walking through creating and using them
- Not understanding what a project manager should do for each process
- Not expecting to see questions worded differently on the exam
- Not expecting to see questions you can't understand
- Not being able to answer most input or output questions without studying
- Thinking you can pass this exam without proper training and experience using the project management tools
- Not being adequately prepared

Questions with more than one "right" answer:

- Everyone has difficulty with questions with more than one "right" answer
- Practice looking for and addressing these in PM FASTrack®

Expect hard to read, and questions you have never seen before:

- Just say to yourself, "Who wrote this thing?" Then mark it, and move on to the next question.
- Skip questions you cannot understand or don't know. Mark them, move on, and come back to them.

Summary

So quit losing sleep by using these tips that will help you to reduce or eliminate your worries about the exam.

Good luck!

Find Your Large Project

Instructions: Work individually. Describe information about a large project that you will use as an example.

- How many stakeholders? List them. Are any negative? Why?
- How many contracts? What types?
- Estimated project length? Estimated project budget?
- What functional areas are affected?
- What is the organizational structure?
- What is the organization's priority for the project?
- What are some of the major product deliverables?
- What are some of the major risks?
- Are you the buyer or seller PM for the project?
- What resources are needed? Type, quantities, skills?
- What are the key metrics or needs related to quality?
- What key areas or issues will need to be communicated?

Quality Management Process
(*PMP Exam Prep*, Page 351)

Space for notes

Plan Quality Management	Manage Quality	Control Quality
Process Group		
High-Level Description of What Each Process Focuses On		
More Detailed Description of What Each Process Focuses On		

Exercise: Quality Management Process

(*PMP Exam Prep*, Pages 326-327)

Plan Quality Management	Manage Quality	Control Quality
Process Group		
Project planning	Project executing	Project monitoring and controlling
High-Level Description of What Each Process Focuses On		
• What is quality? • How will we ensure it?	• Are we following the policies, metrics, procedures, and processes as planned? • Are the procedures and processes giving us the intended results? • Will we meet the quality objectives?	• Are the results of our work meeting the standards and required metrics? • Is the variance within acceptable l imits, or do we have to take action?
More Detailed Description of What Each Process Focuses On		
• Review management plans and project documents to understand quality requirements on the project. • Identify quality practices as well as internal and external standards relevant to the product, project, and project management efforts (OPAs and EEFs). • Create additional project-specific processes,standards, and metrics. • Determine the processes that will be used on the project. • Determine what work you will do to meet the standards. • Determine how you will measure to make sure you meet the standards. • Plan for process improvement.	• Use measurements from Control Quality to confirm that: –Policies and processes are being followed –Policies, metrics, and processes are still appropriate for the project –Policies and processes are effective in achieving planned quality results • Use data-representation techniques to analyze results of quality testing. • Determine the root cause of quality problems/ variances from plan. • Perform continuous improvement to increase efficiency and effectiveness. • Create test and evaluation documents for use in Control Quality.	• Inspect and measure the quality of deliverables to determine whether they meet requirements. • Use the PMIS to track deviations from planned quality. • Identify the need for quality improvements (corrective or preventive action, and defect repair). • Complete checklists and checksheets, perform tests, and evaluate results. • Graphically document results of testing and evaluation using data-representation techniques. • Verify deliverables. • Validate approved changes. • Recommend improvements to testing processes.

Project Manager's Responsibilities Include:

Instructions: Read the list. Mark any items you currently are not completing.

- Determine what human and physical resources you will need.
- Negotiate with resource managers for the optimal available resources.
- Work with the procurement department if necessary.
- Confirm availability of assigned resources.
- Create a project team directory.
- Create project job descriptions for team members and other stakeholders.
- Make sure all roles and responsibilities on the project are clearly assigned.
- Understand the team members' training needs related to their work on the project, and make sure team members get any necessary training.
- Create a formal plan—the resource management plan—covering topics such as how the team will be involved in the project and what roles they will perform.
- Make sure the needs of all team members are acknowledged and considered.
- Create recognition and reward systems
- Use emotional intelligence (EI).
- In a change-driven environment, encourage self-organizing teams and provide support as needed.
- Plan for and manage communications challenges specific to virtual teams.
- Tailor the resource management plan as appropriate to the needs of the project.
- Encourage collaboration among team members.
- Determine what physical resources will be needed on the project, and when they will be needed.
- Determine the quality, grade, and amount of physical resources needed on the project.
- Plan ahead to ensure physical resources are available and accessible when needed.
- Use resources efficiently.
- Look for ways to improve resource utilization.
- Evaluate and select appropriate methods of managing physical resources.
- Send out letters of commendation to team members and their managers to recognize exceptional performance of project work.

Questions:

Procurement Process (Continued)

(*PMP Exam Prep*, Pages 553- 554)

Space for notes

Plan Procurement Management	Conduct Procurements	Control Procurements
Key Actions		

-Continued

Procurement Process (Continued)
(*PMP Exam Prep*, Pages 553- 554)

Space for notes

Plan Procurement Management	Conduct Procurements	Control Procurements
Key Outputs		

Exercise: Procurement Process

(*PMP Exam Prep*, Pages 555-556)

Plan Procurement Management	Conduct Procurements	Control Procurements
Key Actions		
• Perform make-or-buy analysis. • Create a procurement management plan. • Create the procurement strategy for each procurement. • Create the procurement statement of work for each procurement. • Select the appropriate contract type. • Create terms and conditions, including standard and special conditions. • Create bid documents. • Determine source selection criteria. • Gather and analyze data on prospective sellers, the market, and market price. • Estimate time and cost for contract and work.	• Find potential sellers through advertising, a preapproved seller list, or other means. • Send procurement documents. • Hold a bidder conference. • Answer sellers' questions. • Receive the seller responses. • Compare the proposals to the source selection criteria using a weighting or screening system to pick/shortlist the sellers. • Receive presentations from seller(s). • Compare to independent estimates. • Hold negotiations. • Use interpersonal and team skills, such as negotiation. • Allocate risk to sellers when appropriate.	• Understand the legal implications of your actions. • Hold procurement performance reviews. • Request changes. • Administer claims. • Manage interfaces among sellers. • Report performance. • Monitor, analyze, and report on performance against the contract. • Review cost submittals and make payments. • Perform inspections and audits. • Maintain records of everything. • Accept verified deliverables. • Perform procurement audits. • Negotiate settlements. • Create lessons learned. • Complete final contract performance reporting. • Validate the product. • Issue formal acceptance. • Update records. • Create a procurement file. • Perform financial closure.

-Continued

Exercise: Procurement Process (Continued)
(*PMP Exam Prep* Continued Pages 555-556)

Plan Procurement Management	Conduct Procurements	Control Procurements
Key Outputs		
• Make-or-buy decisions • Procurement management plan • Procurement statements of work • Procurement strategies • Bid documents • Selected contract type • Source selection criteria • Change requests • Independent contract estimates	• Selected sellers • Signed contracts • Resource calendars • Change requests • Project management plan updates • Project documents updates • Recommendations and updates to the processes and procedures for organizational procurement practices • Organizational process assets updates	• Substantial completion of contract requirements and deliverables • Work performance information • Change requests • Project management plan updates • Project documents updates (including updates to procurement documents) • Organizational process assets updates • Formal acceptance • Closed procurements • Lessons learned and records updates

Exercise: Control Procurements

Instructions: Work as a team. For each example, describe how you would manage differently, depending on the type of contract. **Duration:** 7 minutes

Fixed-Price Contract
Evaluate change based on approved scope baseline
Interpret what is/is not in the contract
Accept verified deliverables

Time and Material Contract
Authorize payments to seller
Control quality according to requirements inthe contract
Validate that the correct scope is being done

Cost-Reimbursable Contract
Review invoices
Hold procurement performance reviews
Resolve disputes

Risk Management Process

***(PMP® Exam Prep,* Pages 481-482)**

Space for notes

Plan Risk Management	Identify Risks	Perform Qualitative Risk Analysis	Perform Quantitative Risk Analysis	Plan Risk Responses	Implement Risk Responses	Monitor Risks
Actions						

-Continued

Risk Management Process
(PMP® Exam Prep, Pages 481-482)

Space for notes

Plan Risk Management	Identify Risks	Perform Qualitative Risk Analysis	Perform Quantitative Risk Analysis	Plan Risk Responses	Implement Risk Responses	Monitor Risks
Outputs						

Exercise: Risk Management Process

(PMP Exam Prep, Page 483)

Plan Risk Management	Identify Risks	Perform Qualitative Risk Analysis	Perform Quantitative Risk Analysis	Plan Risk Responses	Implement Risk Responses	Monitor Risks
Actions						
Answer the following questions: How will you perform risk management on the project? What risk management policies or procedures exist for use on the project and what new ones are needed? When will the processes and procedures of risk management be performed? How will risks be identified, and what tools will be used? What are stakeholders' roles and responsibilities for risk management? How will you budget for risk management? What are the appetites and thresholds for risk?	Identify all the risks on the project. Use tools such as brainstorming, root cause analysis, documentation review, checklists, interviews, SWOT analysis, assumptions and constraints to facilitate risk identification. Involve and engage stakeholders in the risk management process.	Qualitatively determine which risk events warrant a response. Assess the quality of the risk data. Complete a risk urgency assessment. Subjectively determine the probability and impact of all risks. Determine if you will perform quantitative risk analysis or proceed directly to risk response planning. Document the watch list (non-critical risks). Determine the overall risk ranking for the project.	Numerically evaluate the top risks. Quantitatively determine which risks warrant a response. Determine initial reserves. Create realistic time and cost objectives. Determine the probability of meeting project objectives.	Use risk response strategies to decrease project threats and increase opportunities. Create contingency and fallback plans. Determine secondary and residual risks. Calculate final reserves. Determine risk owners (if not already done). Identify risk triggers. Accept risks, where appropriate.	Implement contingency and fallback plans (risk owner and resources). Answer questions and facilitate clarification of plan details. Communicate with stakeholders according to the plan.	Respond to risk triggers. Monitor residual risks. Create workarounds. Evaluate effectiveness of plans. Look for additional risks; then qualify, quantify, and plan responses for them as necessary. Revisit the watch list. Analyze work performance data and look for trends. Update plans. Communicate risk status. Close risks. Recommend changes, including corrective and preventive actions. Perform risk audits and risk reviews. Perform reserve analysis.

-Continued

Exercise: Risk Management Process (Continued)

(PMP® Exam Prep, Page 484)

Plan Risk Management	Identify Risks	Perform Qualitative Risk Analysis	Perform Quantitative Risk Analysis	Plan Risk Responses	Implement Risk Responses	Monitor Risks
Outputs						
Risk management plan	Risk register updates including: • List of risks • List of potential risk responses Risk report with summary information on risk details and the sources of overall project risk Project documents updates, such as lessons learned in the identification of risks for the project, any issues, and new or existing assumption and constraint information	Risk register updates including: • Risk ranking of the project as compared to other projects • List of prioritized risks • Risks by category • Risks needing additional analysis and response • Watch list • Data on probability and impact analysis • Data on risk urgency • Assumptions and constraints analysis updates in assumptions log	Project document updates including the following updates to the risk report: • Assessment of overall project risk exposure • Probability of meeting objectives • Interpreted quantitative analysis results, such as key sources of overall project risk • Prioritized list of individual project risks • Trends in quantitative risk analysis results • Recommended risk responses • Initial reserves Updates to the risk register on the specific analysis for individual project risks	Change requests Updates to the project management plan and project documents including: • Assumption log • Cost forecasts • Lessons learned register • Project schedule • Project team assignments • Risk report Updates to the risk register including: • Residual and secondary risks • Contingency and fallback plans • Risk owners • Triggers • Final reserves • Contracts • Accepted risks	Change requests to project management plan, including schedule and cost baselines Updates to project lessons learned register, including the effectiveness of risk responses and recommendations for managing future risks Updates to the issue log regarding areas of confusion or disagreement Updates to the risk report regarding: • Overall project risk exposure after implementing planned responses • Updates to the risk register, including data on risk response implementations	Work performance information Updates to the risk register and other project documents including: • Outcomes of risk reviews and audits • New risks • Closed risks • Details of risk occurrences • Lessons learned Workarounds Change requests, including recommended corrective and preventive actions Updates to the project management plan and organizational process assets Updates to the risk report

Exercise: Cost Management Assessment

Instructions: Work individually. Check yes or no for each question below.
Duration: 3 minutes

Do You ...?		Yes	No
1	Estimate all project costs including human and physical resources		
2	Know, at any point in our project, the expected spend		
3	Know, at any point in the project, the actual amount spent		
4	Know how to interpret EVM numbers		
5	Use EVM information on a regular basis		
6	Know or set the acceptable range of cost estimates		
7	Provide SME the cost estimate information on the format and methods of estimating		
8	Establish a plan for how SMEs will estimate		
9	Find out SMEs' confidence about estimating		
10	Establish a level of precision needed in estimating		
11	Establish a level of accuracy		
12	Establish acceptable variance ranges for cost measures		
13	Know when and how cost performances will be measured		
14	Know control thresholds		
15	Establish report formats and timing		
16	Record the basis of estimates		
17	Record cost estimating assumptions, risk, and lessons learned		
18	Use a variety of estimating techniques: analogous, parametric, bottom-up, 3 point		
19	Analyze the cost of quality		
20	Perform funding limit reconciliation		
21	Determine the project funding requirements		
22	Create a cost baseline to measure against that includes contingency reserves		
23	Create cost forecasts while the project is going on		
24	Create a time-phased project spending plan		
25	Project budget includes management reserves		

Total _____

Total number of NO responses

0-10 You are fortunate to be able to focus on fewer gaps, but be sure you understand how they may be used on the exam.

11-20 Some additional work is ahead for you. To target your study plan, analyze carefully what you don't do.

21-25 Don't be discouraged. The chapter in the *PMP® Exam Prep* will help tremendously but you will likely need to work on thinking through how planning and managing project cost would be different within the context of the exam.

Earned Value Project Management... An Introduction

By Quentin W. Fleming & Joel M. Koppelman, Primavera Systems, Inc.

Earned value is a project management technique that is emerging as a valuable tool in the management of all projects, software projects in particular. In its simplest form, earned value equates to fundamental project management. Here the authors describe the technique in a storybook form. It is not necessarily a true story... but it could be.

Once upon a time there was a young man who wanted to be a project manager. Don't ask us why.

In school the young man took the most challenging of the technical subjects, but he also liked to manage things. He graduated with a master's degree in a technical discipline and immediately went to work for a small but fast-growing high-tech company. This company was a leader in developing new products for its niche of the market. The company had just gone public and its initial public offering of stock was a huge financial success. He knew he had joined the right company. All he wanted was his chance at bat. He wanted to be a project manager.

A year went by and he had yet to receive an assignment of any consequence. He was becoming discouraged. He considered updating his resume to start looking around. If his present employer did not recognize his talents, perhaps others would. He did not have time to waste.

One day as he walked down the hall the chief executive approached him. She inquired as to how he was getting along. Then she asked him, "How would you like an important assignment as manager of a development project?" The young man could hardly convey his enthusiasm. Then the CEO said, "If you are interested, call my secretary and get on my calendar for the first thing in the morning." As she left, she commented to him, "This is an extremely important project for the company, and I think you could manage it nicely. See you then."

Our young man got little sleep that night. Imagine, his chance to manage a project—to be a project manager. He was in the chief executive's office 30 minutes before she arrived. When they met she started by saying, "This is one of the most important potential new products we have in the pipeline, but it needs some innovative thinking, and that is why I think you would be the right person to take this on. I need fresh ideas incorporated into this product."

She outlined the concept for the new product. It was exactly the type of work he had prepared himself to do. She asked him to gather a half dozen cross-functional people from within the company and to prepare a project plan for her approval."If you have any problem getting people, use my name to break them loose. I don't want stonewalling by anyone; this product is important to our future growth."

Then she closed the meeting by saying, "The time to market is most critical on this project; I know others are working on it, and I want to be first into the marketplace." The young man got the message, and it was better than he had ever hoped. On his way out she mentioned another issue.

"I would also like you to use a technique I have heard about but cannot seem to get started here: earned value management. Have you ever heard of it?"

"Yes, of course. We studied it in school and I think it would work well on this project," he replied.

"Good. I look forward to seeing your performance plan," she told him.

The young man circulated within the company and got commitment from the right people to do the planning. This was a young start-up company so the "brick walls" so pervasive in older, more established companies had not set in.

-Continued

Earned Value Project Management... An Introduction (Continued)

All he had to do was mention that the boss was behind this assignment and he got his people. He did not even have to describe the details of the assignment, they all knew it was high priority.

Planning for Performance Measurement

His team met at his apartment to prevent interruptions and phone calls. "It shouldn't take us very long to put a plan on paper," was his opening remark. They spent the day conceptualizing and defining the project. After he solicited the team's ideas, he planned to prepare the final plan for review and approval of the team, prior to submittal to the CEO. The project manager wanted everyone to buy into the project plan. They all knew exactly what was required in order to employ earned value performance measurement. It was classic "Project Management 101."

First they had to define what constituted 100 percent of the assumed project scope. They used a Work Breakdown Structure (WBS) diagram. Next they would decompose the project scope into measurable tasks, each with an estimated value, and assign responsibility for actual performance to some functional manager within the company. They used a WBS dictionary to record their thoughts. They knew that their project had 10 units to develop and test, and that each unit would require about the same level of resources to accomplish.

Next they would take the work, broadly conceptualized from the WBS diagram and dictionary, and prepare a detailed plan and schedule for all the major critical tasks. After a few iterations they had their Project Master Schedule (PMS), fully supported by critical path methodology. They did a forward and backward schedule pass to provide assurances that their PMS was viable. The project would take 18 months to perform from go-ahead to completion.

Lastly they estimated the resources required to produce these 10 units, which constituted the total project. Each article would cost $150,000 to produce, thus the total project would run $1.5 million dollars to complete. They charted their requirements as illustrated in Figure 1, which they termed their project management plan. This display would contain the three critical elements of the plan: WBS, PMS, and a project performance display graph. Each element was supported by detailed break-outs. This process is typically called bottoms-up planning. The team had done its job; it was now time for the project manager to take its plan to the CEO for her approval.

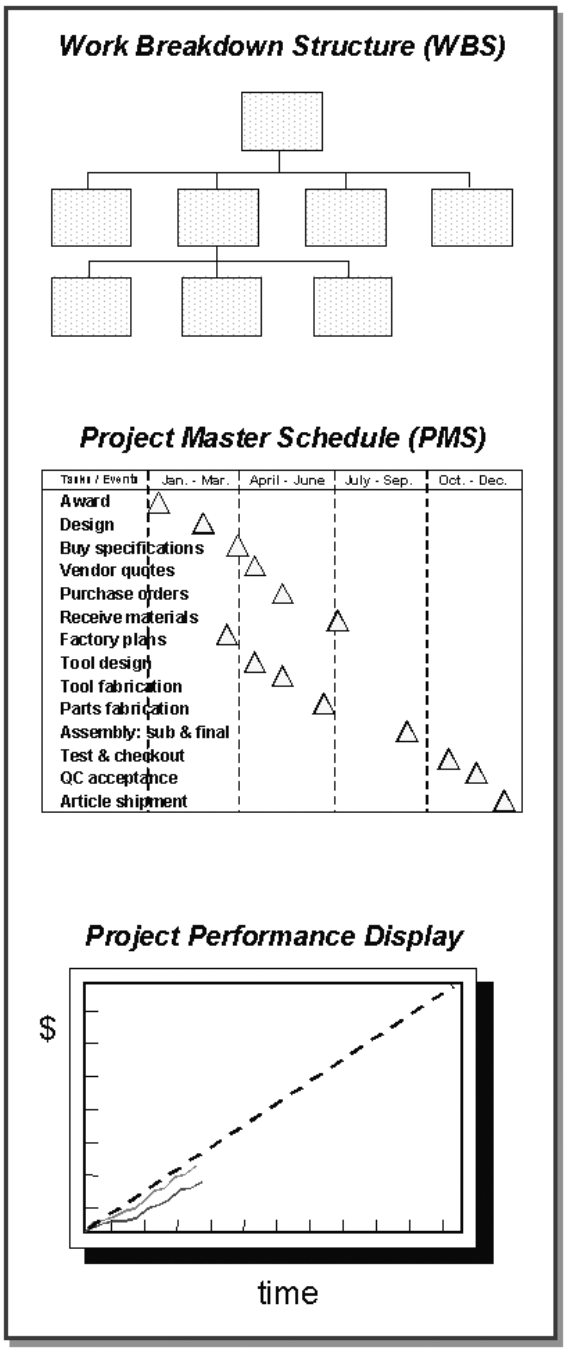


Figure 1. Project management plan

Management's Approval

The project manager made a copy of the project management plan and gave it to the CEO's secretary so the CEO could review it prior to

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Earned Value Project Management... An Introduction (Continued)

the approval meeting. When he was at last able to meet with the CEO, it was obvious that she had thoroughly read the entire plan; everything was marked and color coded. He hoped she liked what she had read. The CEO opened on a positive note. "This is the finest internal project management plan I have ever seen as head of this company, and we will use it as a model for all our future projects to follow." The project manager was off to a good start.

"However, you must not have heard parts of my requirements. Time to market is most critical on this project, and you are projecting a casual schedule of 18 months. That is completely unacceptable. I need this project completed in not more that 12 months, can you handle that?" The young man took a deep breath.

"Of course we can," he said. He had no clue as to how he would do this, but the message from on high was becoming pretty clear.

"Also, I think you have gold-plated this job at a cost of $1.5 million, that also is unacceptable!" The boss was relentless. "The most I could allocate for this project would be $1 million; we are not a big company, I have other commitments. Can you handle that?"

The young project manager was beginning to understand why she had become CEO at such an early age . . . she was one tough person to deal with. Without hesitation the young man accepted the budget dictate.

The CEO realized that she had come down pretty hard on the young man and wanted to provide some consoling words before he left.

"Again I want to emphasize that this is the best project plan I have ever seen in this company. It will be our model for others to follow." Her words were some comfort, although the project manager was starting to worry about what he would say to the other members of his team. Their buy-in was essential to him.

As he was leaving the office the CEO said, "I am very pleased that you are going to employ earned value measurement on this project. I would like to review your performance each quarter, at say three months into your 12-month project."

"She never lets up," was the thought that raced through his mind. "What do I tell the others?"

Welcome to the World of Project Management

Let us stand back from this story and try to assess what took place. A project team met and developed a thorough, comprehensive project plan, with sufficient supporting data and schedule metrics so they could measure their earned value performance from start to completion. In particular, they had scoped 100 percent of the total assumed project before they would begin to perform and created a plan that could be measured. Good.

Their supporting bottoms-up detail indicated that they needed 18 months to complete the project, and the boss directed them to do it in 12 months. They estimated the costs for the project at $1.5 million and the boss cut it to $1 million. What do we call this kind of an environment the young project manager experienced for the first time? We call it real-life project management.

Rarely do we ever get the total time we think we need to reasonably perform the job. We are always competing with others to do something first. The authorized budgets are rarely what we estimate we need to complete any job. We frequently are given what has been termed "a management challenge" and we do our best. It matters not if these management challenges are arbitrary, unreasonable, unattainable, unrealistic, stupid, and so forth. As project managers, we must find a way to get it done.

-Continued

Earned Value Project Management... An Introduction (Continued)

Welcome to the world of project management.

The First Quarterly Project Status Review

Three months went by. It was time for the team to present its performance results to the chief executive and the management committee. This would be an awesome new experience for the young project team, but working in its favor was the fact that the team was performing to a detailed plan, and knew exactly what it had to do from the go-ahead.

A brief summary of the team's results indicated the following: Three units had been scheduled for completion at the three-months point, but only two were accomplished, thus members were slightly behind their planned schedule. They had forecasted expenditures of $300,000 and had committed $300,000, so they were right on their funding profile. An optimistic person could easily paint a positive picture of this project.

"We are a little behind schedule, we are right on our spend plan; leave us alone and life will be good," would be the spin put on these results by most practitioners.

However, the chief executive had specifically asked that this project employ earned value project management, and that requires a slightly different orientation with these same project performance data. Earned value management requires a detailed, bottoms-up performance plan, measurement taken against one's own plan, and a periodic forecast of the final expected results, based on actual performance results. Earned value requires detailed measurement against the project plan. In order to employ earned value, there must be a plan in place that allows the continuous measure of seven points of data. This may sound complicated and cumbersome, but it is not. It is simply the kind of data most projects have, but it may not be looked at in quite the same way. Earned value has a focus on its percent complete position against its (100 percent) defined scope.

In order to employ earned value, we must first know at all times what the planned value is as of any point in time. To determine this we need to focus on two issues.

We must determine (1) how much physical or intellectual work we have scheduled to be completed. This is a direct fall-out of those detailed tasks contained in our PMS. (Important point: Earned value requires a master project schedule; without a master project schedule one cannot perform earned value management.) In this case the PMS described three units to be accomplished as of the measurement period.

We need to determine (2) the budgeted value of the work scheduled. We were authorized $100,000 per unit, so our budgeted value for work scheduled was $300,000. Thus, we have set our planned value for the first three months of the project at $300,000 (2).

Next we will want to measure our earned value for the reporting period. To measure this we need two new points of data, which we will call items (3) and (4).

As of the reporting period, (3) how much of our scheduled work have we actually accomplished? We examine our PMS and find that we have accomplished two of the three units we originally scheduled.

Next, (4) what is the budgeted value of the work actually performed? In this case we were authorized $100,000 per unit, so our earned value for the reporting period is $200,000. (Never mind actual costs at this point, they will only confuse the issue.) Thus, items three and four constitute our earned value for the period (3).

The next item we need to determine is, for the earned value work we have accomplished, (5) what costs have we actually spent and/or incurred? We look at our cost ledger and find we have incurred actual costs of $300,000.

-Continued

Earned Value Project Management... An Introduction (Continued)

We now have our earned value results for the first quarter, quantified in dollars, and a performance pattern is starting to emerge:

Planned Value — $300,000 (items 1 and 2)
Earned Value — $200,000 (items 3 and 4)
Actual Costs — $300,000 (item 5)

We now need to ascertain our project performance variances, which is a slightly different look at data with earned value measurement.

We need to understand (6) the schedule variance, which in earned value is the difference between our planned value scheduled and our earned value achieved. In this case, we planned to accomplish $300,000 of work, but only did $200,000, so we are behind our planned schedule by $100,000. Not so bad until we realize that we only accomplished 67 cents for each dollar we planned to do.

Lastly, we need to know (7) what our cost variances have been. This is determined by relating our earned value accomplished against the actual costs spent or incurred. Thus, we spent $300,000 in actual costs to accomplish $200,000 in earned value. Not so good when we realize that for each dollar we spent we got only 67 cents of value earned.

The team put the results of its earned value performance on a display chart for presentation to the management committee, as is illustrated in Figure 2. Not a pretty sight, but one of extreme importance in the portrayal of the true status of project performance. This project at the end of the first quarter is behind its planned schedule, and is overrunning its costs. At the 20 percent completion point, monitoring earned value data, it is forecasting a significant final overrun.

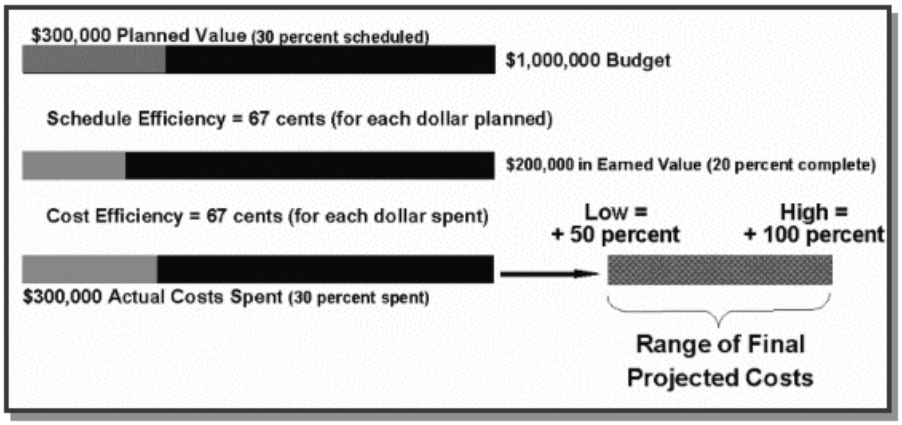

Figure 2. Earned value performance results

If the project continued at its present cost efficiency rate of 67 cents for each dollar spent, it would need 50 percent more budget to complete the work ($1,000,000 / .67 equals $1,500,000). If it also tries to get back on the 12-month schedule, it will have to add additional resources to do the same work, so the projected costs would equate to a 100 percent overrun.

Most people do not like to hear bad news. But this chief executive knew that bad news does not improve with time, it only gets worse. At issue: Bad news known at the 20 percent point in a project's lifecycle gives management some opportunity to take corrective actions and alter the final results.

Conversely, bad news that is ignored or not addressed until perhaps the 80 percent completion point severely limits management's opportunities to make the necessary changes to recover performance.

This was exactly the kind of display the CEO wanted to see on this most critical project. She now declared, "Thank you for this presentation; it has been most informative. I now know I was perhaps a little too arbitrary in my initial budget authorization to you. I will authorize you a revised budget amount of $1.5 million to complete this project."

-Continued

Earned Value Project Management... An Introduction (Continued)

"Thank you," was the surprised response from the young project manager. He knew that the team needed at least that amount to complete this project.

(One of the primary reasons earned value results become so reliable at the early phases of a project's lifecycle—at the 15 percent to 20 percent point—rests on the human nature side of the planning process. If one has a period of project performance extending one full cycle, where will you likely place your best planning—in the early periods or in the later periods? Likely in the early periods, and hope for the best in the later periods. Also, if one has a severe budget challenge, where will the most adequate budget be distributed—in the early or late periods of the project? Likely in the early periods. It is human nature to provide the best planning and the best resources to the early periods, and hope for the best. Thus, the results of earned value performance measurement have been found to be most reliable, even at the early periods, say 15 percent, of the lifecycle of a project.)

But the CEO was not going to let anyone off the hook just yet.

"However, I want you to catch up on the late schedule position, and bring us a completed project in another nine months. Can you do that?"

"Yes we can, but it will take an accelerated schedule, and that will likely cost us the full $2 million as we have presented to you," (see Figure 2), was the project manager's reply.

"OK, I will authorize this project a total budget of $1.5 million but ask that you complete it within the 12-month schedule," the CEO directed. "However, as we both well know, to recover this behind-schedule condition will likely cost us some money, so I will put $500,000 in my management reserve in case we need it. But it is not your money and we want you back on schedule. Am I making myself clear?" said the CEO.

"Absolutely clear, and we promise to do the best we can for the authorized budget," said the project manager.

"But getting back on schedule is your main performance objective, and the budget goal is simply my management challenge to you. Understand, the schedule comes first," was the CEO final comment.

"Understood," said the young project manager, who was beginning to appreciate the delicate role he was playing.

The Value of Earned Value

Standing back from this situation, we see that this project was likely under-budgeted (at $1 million) from the start. But based on what was authorized and what the project performance was experiencing, the likely final forecast of budget needs was in the statistical range of between $500,000 to $1 million over the official budget. Both the project manager and the CEO clearly understood that fact. But the CEO was not ready to relax her management challenge to this team. She released an additional half a million dollars to the project, but asked that they also get back on schedule. Getting back on schedule would cost additional resources, and likely require the full million dollars to achieve. But she was not ready to authorize the full amount.

This chief executive knew the benefits of employing earned value. She believed the accuracy of data that was being reviewed by the project team and the final projections of required costs. At the 20 percent completion point the team was predicting an overrun of between 50 percent to 100 percent, and she was convinced that this would be the case. In order to fund the completion of this critical project, she took immediate steps to cancel two other internal projects of lesser value to the company. She knew what she had to do in order to fully fund this highest priority project. Other executives who do not employ earned value or do not rely on the performance data often find themselves overly committed in their project portfolios, sometimes experiencing catastrophic results.

-Continued

Earned Value Project Management... An Introduction (Continued)

This project was completed on time, within the 12-month schedule, but at a final cost of close to $2 million. The new product worked as hoped, and the additional funds to complete the project were made available by the CEO canceling two other projects of lesser importance to the company.

Life was good at this company, and the young project manager's career was off to a good start.

About the Authors

Quentin W. Fleming, senior staff consultant to Primavera Systems Inc., has more than 30 years industrial project management experience. He held various management assignments with the Northrop Corp. from 1968-91, served on an earned value corporate review team, and wrote the corporate policy directive on scheduling.

He was president of the Orange County Project Management Institute (PMI) chapter and developed and taught four PMI Project Management Professional tutorial courses covering scope, cost, time, and procurement management. He has a bachelor's and a master's degree in management and is the author of seven published textbooks, including Earned Value Project Management, which he co-wrote with Joel M. Koppelman. E-mail: QuentinF@Primavera.com

Joel M. Koppelman is president of Primavera Systems Inc., which provides a family of project management software products. Before co-founding Primavera in 1983, he spent more than 12 years planning, designing, and managing major capital projects in the transportation industry, including duties as vice president and chief financial officer for Transportation and Distribution Associates Inc. Before that, he was affiliated with the management consulting firm of Booz Allen Hamilton Inc.

Koppelman is a registered professional engineer with a bachelor's degree in civil engineering from Drexel University and a master's of business administration degree from the Wharton School of the University of Pennsylvania. He is a frequent speaker at universities and for international management organizations. E-mail: JKoppel@Primavera.com

Notes

1. The Department of Defense (DoD) has called this the Budgeted Costs for Work Scheduled (BCWS) for three decades, but we choose to call it simply the Planned Value.
2. The fact that we originally estimated that each unit would require $150,000 to accomplish is only interesting to us. Management has authorized $100,000 per unit, and does not want to hear about other issues.
3. The DoD typically has called this the Budgeted Costs for Work Performed, or BCWP.

Ethics and Professional Responsibility for International Business

Ethics and professional responsibility are pervasive themes throughout the business world. The project management profession is no different. We expect others to deal with us ethically and responsibly, and we generally believe we act ethically. Rules of conduct are defined in very concrete, black and white terms because our everyday situations require human judgments that cannot be completely documented. While clear rules are useful and necessary, any one set of rules is too simplistic to represent the complexities of our daily decisions. Increasing that complexity is the fact that different cultures have unique perceptions of what constitutes ethical behavior. We cannot assume that everyone operates under the same rules. Since it is increasingly common for our business relationships to extend globally, it is important to understand cultural differences and how they may impact our interactions. For doing business ethically and responsibly, we must understand and operate within sometimes conflicting systems while maintaining the integrity of our own personal values.

This article is to help you understand this multi-layered environment in which you must operate. Because you are preparing to sit for your PMP credential, we will focus on PMI's Code of Ethics and Professional Conduct[1]. We'll also provide an overview of the United Nations Global Compact ("Global Compact"). The Code of Ethics and Professional Conduct will help you pass your exam and be instrumental in your project management practice. The Global Compact will help you understand the significant efforts nations have made to standardize the definition of ethical behavior in business relationships throughout the world. Together, these should help you go beyond passing the PMP exam and make sound, ethical, and responsible decisions throughout your career.

As a project manager seeking the PMP credential, you are agreeing to conduct yourself in a manner consistent with the Code of Ethics and Professional Conduct. So acting ethically means not only knowing these rules of conduct, but choosing to act in a manner consistent with them, regardless of the cost. For the exam, the key is to not only understand the Code of Ethics and Professional Conduct, but to understand how to answer situational questions where the situation described presents you with choices that conflict with it.

The Code of Ethics and Professional Conduct

PMI holds its members and certificate holders accountable to the Code of Ethics and Professional Conduct. The bases of this code are responsibility, respect, fairness, and honesty.

Responsibility requires us to follow through on our commitments and be personally accountable for our decisions and actions, and holding others accountable for their decisions and actions. This includes obeying laws.

Respect includes our attitude not only toward ourselves, but toward others, even when we may have conflicting opinions, values, or priorities.

1 *http://www.pmi.org/-/media/pmi/documents/public/pdf/ethics/pmi-code-of-ethics.pdf*
Be sure to download and read the entire Code of Ethics and Professional Conduct.

-Continued

Ethics and Professional Responsibility for International Business (Continued)

Fairness entails objectivity and lack of bias. This includes recognizing and acknowledging conflicts of interest, or perceived conflicts of interest, in our negotiations and decisions, avoiding discrimination, and avoiding participating in bribery in order to further our personal or business agenda.

Honesty means telling the truth at all times, even when doing so may not seem to be in our personal or organizational best interest.

United Nations Global Compact

The United Nations initiative encouraging businesses throughout the world to adhere to standards for ethical behavior is called the Global Compact. The principles of the Global Compact include human rights, labor standards, environmental responsibility, and guarding against corruption, including extortion and bribery.

Human rights, as covered in the Global Compact, include freedom of thought, conscience, and religion. These are closely related rights that protect the freedom of an individual or community, in public or private, to think and freely hold conscientious beliefs and to manifest religion or belief in teaching, practice, worship, and observance. The concept is generally recognized also to include the freedom to change religion or not to follow any religion.

Labor standards deal with the right to collective bargaining, and eliminating child labor and discrimination in the workplace.

Environmental standards support responsible use of natural resources and protection of the environment.

Anti-corruption focuses on preventing extortion and bribery. For example, the United States Federal Corrupt Practices Act, enacted in 1977, deals specifically with bribery, which is sometimes politely called a "facilitating payment." The Act prohibits US companies from paying (money or other items of value) to foreign officials for the opportunity to work with other companies. US companies are also required to maintain accurate bookkeeping records documenting their business dealings.

Ethics on the PMP Exam

Again, different cultures perceive ethics, and even the law, differently. So, an earlier statement bears repeating: For the exam, the key is to not only understand the Code of Ethics and Professional Conduct, but to understand how to answer situational questions where the situation described presents you with choices that conflict with it.

The key is to always act in accordance with PMI's Code of Ethics and Professional Conduct.

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Ethics and Professional Responsibility for International Business (Continued)

You may encounter situational questions that describe scenarios similar to those that follow.

Legal fee vs. "bribe". Read questions carefully that describe payment made outside of the context of legally and ethically negotiated procurement contracts. Does the situation described ask you to pay a fee that is legal and ethical, or is the fee really a bribe? Bribery is a particularly relevant issue for project managers involved in global projects because some cultures view bribery as an acceptable practice, although against the law. In others, there are practices that could be perceived as bribery – gift giving, for example, or imposition of fees for consideration of a proposal, or for the ability to move through an area. Remember that according to the Code of Ethics and Professional Conduct, bribery is not an allowable practice. If you are unsure, seek legal advice. For such questions, look for an answer that does not violate the Code of Ethics and Professional Conduct.

Nepotism. Look for answers to questions that do not include a person's relationship to another as a qualification to be considered for a project role, a job, undue influence or any other form of favoritism based on familial or other personal relationships. A person must be legitimately qualified to be in a role on a project and/or win a contract.

Honesty. There are surely times in life when 100% complete unmitigated honesty is not the best policy. But for the exam, 100% complete unmitigated honesty is always the best policy. For example, if your boss asks you to alter data – ever so slightly – for a report because it will do no harm, and in fact, will benefit the project in every way, do you do it? No. Ethically, you cannot represent anything but the complete truth at all times.

Copyright/Trademark/Ownership. In everyday life, occasionally you might find that people will see no harm in making a single copy of copyrighted material to share with a colleague. According to your professional responsibility, however, you may do it for personal use, but the colleague would need to purchase their own original, no matter how harmless it seems to share.

General Tips and Guidelines

- Donaldson[1] provided a very useful list of Fundamental Human Rights that can help you make decisions for exam questions with ethical issues that may not always seem clear cut.

Ask yourself: Does the action seem as if it may violate any of these? If so, do not carry out the action!

- Donaldson[2] also provided two "ethical test" questions that must be asked together as a pair. On the exam, if it appears a culture has standards for a practice that are seemingly in conflict with those of your culture or the Code of Ethics and Professional Conduct, then ask yourself these questions for each of the answers to the test question.

1 Donaldson, Thomas; The Ethics of International Business (Oxford University Press, 1989)
2 Donaldson, Thomas; The Ethics of International Business (Oxford University Press, 1989)

-Continued

Ethics and Professional Responsibility for International Business (Continued)

If the answer to the first question below is "No," then the answer to the second must also be "No".

–Is it possible to conduct business successfully in the host country without undertaking the practice?

–Is the practice a clear violation of a fundamental human right?

For example, let's say that a country practices systematic discrimination against a group of people. Since it is not possible to conduct business there without also practicing discrimination, the answer to the first question is "No." What follows then, is "Does practicing discrimination violate a fundamental human right?" Since that answer is "Yes," you should find a different country in which to do business.

Fundamental Human Rights (The Ethics of International Business, Thomas Donaldson[1])

1. The right to freedom of physical movement.
2. The right to ownership of property.
3. The right to freedom from torture.
4. The right to a fair trial.
5. The right to non-discriminating treatment (freedom from discrimination on the basis of such characteristics of race or sex).
6. The right to physical security.
7. The right to freedom of speech and association.
8. The right to minimal education.
9. The right to political participation.
10. The right to subsistence.

1 Donaldson, Thomas; The Ethics of International Business (Oxford University Press, 1989)

- If it is illegal in your own country, then it is not ethical to do it.
- If it is unethical and you cannot do the project without it, do not do the project.
- Always, always, always ensure a safe environment for the team. This applies to physical environments as well as a humane, safe, and secure environment that does not violate rights as defined in the Global Compact, as can be summarized as Donaldson has done above.
- Remember that as a project manager, you do not have to know all the answers. When in doubt, seek advice – most importantly, legal advice where needed.
- If you know PMI's Code of Ethics and Professional Conduct and you answer all questions with strict adherence to it, you will score well in this area of the exam.

How to Study After RMC's PMP® Exam Prep Course

Imagine that you could get advice from thousands of others who have taken our course. Well, we have done it for you. Do not fool around—the following plan is exactly how you should study after this class. Be careful! Depending on your previous training and real-world experience, you may need more study time.

NOTE: This page applies only to RMC students. Others often need hundreds more hours of study and should study differently!

Step	Description	# of Study Hours	Done
1	**Read the *PMP® Exam Prep* book for the first time and complete all the exercises, but don't do the practice exams at the end of each chapter.** Focus more time on the chapters where you have the most gaps in your knowledge or your real-life project management experience, and on items you did not know or did not do prior to beginning this course of study. Refer to Rita's Process Chart for each chapter, and be sure you understand all the efforts involved in the knowledge areas you are working on. At the same time, skim through the corresponding chapter in the *PMBOK® Guide* to get an understanding of the flow of the processes. **TRICK**: As you read, remember to "imagine it into reality" and think "large project" as we described in this course.		
2	**Quicktest**, **Hot Topics, Rita's Process Chart Game.** As you finish each chapter, review the Quicktest terms listed on the first page of the chapter to make sure you know the meaning of each term or concept. Use the Hot Topics flashcards and Rita's Process Chart Game to improve recall and test your understanding of that chapter.		
3	**Studying.** If it is at all possible, form a study group any time after you have read the book the first time. This will actually make your study time shorter and more effective! You will be able to ask others questions, and studying will be more fun. A study group should consist of only three or four people. (See the following discussion in the *PMP Exam Prep* book: "How to Use This Book in a Study Group.")		
4	**Skim through the *PMP Exam Prep* book again**		
5	**PM FASTrack® exam simulator.** Make sure you really know the material and then use the exam simulator. This will give you a baseline against which to track your progress as you continue to study. **WARNING:** Limit yourself to using the exam simulator only twice before you take the actual exam. PM FASTrack®should be used to show where you still have gaps, not to learn the concepts. **Use PM FASTrack® exam simulator and score greater than 75%.** If you score lower than 65%, contact RMC for help. **TRICKS**: • Take the simulated exam like you plan to take the real exam. • Create a download sheet during the exam. • You must be able to answer 200 questions in under 3 hours in practice to give yourself more time on the real exam, so be fast! Do not waste time re-reading questions; just mark them, and do them later • There are "hard to understand," "badly worded" questions, and (more importantly) questions you will think have more than one right answer. You must gain experience dealing with these before you take the real exam.		

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How To Study After RMC's PMP® Exam Prep Course (Continued)

Step	Description	# of Study Hours	Done
6	**Why did I get a question wrong analysis** Review each question you got wrong in PM FASTrack®, writing down the specific reasons for each wrong answer. on the form provided in this Workbook. Assess why the correct choice is correct and why the other answers are wrong. This step is very important! What will you do differently the next time or how will you fill your gaps?		
7	**Study - Fill your gaps** Use your list of why you got each question wrong (from Step 6) to determine which material to study further. This will help you determine how much more study time you need and which chapters to read more carefully. Continue to study, focusing in detail on the areas in which you have gaps in your knowledge and skimming the sections or chapters in which you did well. Correct any errors in your understanding of the concepts discussed in this book. Review the *PMBOK® Guide* to focus on these gaps. Remember, think "large project" and how proper project management should be done, regardless of how you manage projects in your real world.		
8	**Small sample of questions** If you had difficulty with certain knowledge areas, process groups, or concepts and you have studied your gap areas, you may want to answer a small sample of questions (no more than 20) using the Knowledge Area, Process Group, or Keyword function in PM FASTrack®. Analyze why you got any questions wrong, and continue to study your gaps! **NOTE:** You might be tempted to take more than 20 questions, but this is not a good idea.		
9	**Create an exam strategy** Write down a strategy for how you will take the next practice exam and the real exam, and practice your download sheet (in this Workbook).		
10	**Use PM FASTrack® exam simulator a 2nd (final) time** You should score over 75% before you take the real exam. You are overusing PM FASTrack®if you see many of the questions repeated.		
11	**Use the Hot Topics flashcards and other materials** to retain the information you have learned until you take the exam.		
12	**Pass the exam!**		

My Study Plan

Fill this out during class. Keep it current as you study for the exam.

Why Did I Get a Question Wrong?

The questions in the *PMP Exam Prep* book and in PM FASTrack® are provided to help you assess your knowledge and to help you become familiar with the types of questions that are on the exam.

One of the things people fail to do is analyze why they get specific questions wrong. You will need to look for gaps in your knowledge that you can only find by working through questions you answered incorrectly.

Review and then list the specific reasons for each incorrect answer, such as
"I did not read the whole question" or "I did not understand risk response planning."

Assess why the correct choice is correct and why the other answers are incorrect.

The more specific you are in identifying your gaps, the better. Start to look for patterns that you can fix **before** the real exam!

Why Did I Get a Question Wrong? (This page may be copied for personal use only)

Test # (1-200)	Question ID #	Process Groups	Knowledge Area	Knowledge Area Process	Page #	Why specifically did I get it wrong?	What should I study or do differently next time?

Sample Download Sheet

As you study, write down things you do not know on your Gaps Sheet. Over time, remove the items you no longer need to review. Everyone has a few things they just cannot remember and these should go on your download sheet. Practice writing it 3 times before you go to the testing center. When you start your actual exam, take a few minutes to recreate it. PMI and the testing centers allow you to quickly write down information you have studied and memorized as the exam first begins. This may be written on a piece of paper, laminated cards, or a small white board provided to you by the testing center. To be clear, you cannot bring anything with you into the exam. Below is an example of types of information you might include on your download sheet.

PLANNING (This is the only process group with a set order)
Determine development approach, life cycle, and how you will plan for each knowledge area
Define and prioritize requirements
Create project scope statement
Assess what to purchase and create procurement documents
Determine planning team
Create WBS and WBS dictionary
Create activity list
Create network diagram
Estimate resource requirements
Estimate activity durations and costs
Determine critical path
Develop schedule
Develop budget
Determine quality standards, processes, and metrics
Plan communications and stakeholder engagement
Perform risk identification, qualitative and quantitative risk analysis, and risk response planning
Go back—iterations
Finalize procurement strategy and documents
Create change and configuration management plans
Finalize all management plans
Develop realistic and sufficient project management plan and baselines
Gain formal approval of the plan
Hold kickoff meeting
Request changes

Quality Chart		
Plan	Assurance	Control

Things I Always Forget...

More than One Right Answer

Process	Unique Inputs	Tools	Unique Outputs

Formulas
Note: See *PMP Exam Prep*, Page 629

Definitions

What to Read in the *PMBOK® Guide*, *Sixth Edition*

WARNING: This document only applies to those who work closely *Rita Mulcahy's PMP® Exam Prep book*.Others will need to read more of the *PMBOK® Guide* in order to pass the exam.

RMC Learning Solutions suggests that you concentrate on the following sections in the *PMBOK® Guide*, *Sixth Edition*

Section	Topic	Page
1.2.1	Projects	4
1.2.4	Components of the Guide	17
1.2.6	Project Management Business Documents	29
2.2	Enterprise Environmental Factors	38
2.3	Organizational Process Assets	39
2.4.4	Organizational Structure Types	45
3.2	Definition of a Project Manager	52
3.3	The Project Manager's Sphere of Influence	52
4, Figure 4-1	Project Integration Management Overview	71
4.1, 4.1.3	Develop Project Charter	75
4.2, 4.2.3	Develop Project Management Plan	82
4.3, 4.3.3	Direct and Manage Project Work	90
4.4, 4.4.3	Manage Project Knowledge	98
4.5, 4.5.3	Monitor and Control Project Work	105
4.6, 4.6.3	Perform Integrated Change Control	113
4.7, 4.7.3	Close Project or Phase	121
5, Figure 5-1	Project Scope Management Overview	130
5.1, 5.1.3	Plan Scope Management	134
5.2, 5.2.3	Collect Requirements	138
5.3, 5.3.3	Define Scope	150
5.4 (Entire Section)	Create WBS	156
5.5, 5.5.3	Validate Scope	163
5.6, 5.6.3	Control Scope	167
6, Figure 6-1	Project Schedule Management Overview	174
6.1, 6.1.3	Plan Schedule Management	179
6.2, 6.2.2, 6.2.3	Define Activities	183
6.3, 6.3.2, 6.3.3	Sequence Activities	187
6.4 (Entire Section)	Estimate Activity Durations	195
6.5 (Entire Section)	Develop Schedule	205
6.6 (Entire Section)	Control Schedule	222
7, Figure 7-1	Project Cost Management Overview	232
7.1, 7.1.3	Plan Cost Management	235

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What to Read in the *PMBOK® Guide*, *Sixth Edition* (Continued)

Section	Topic	Page
7.2 (Entire Section)	Estimate Costs	240
7.3, 7.3.2, 7.3.3	Determine Budget	248
7.4, 7.4.2, 7.4.3	Control Costs	257
8, Figure 8-1	Project Quality Management Overview	272
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9, Figure 9-1	Project Resource Management Overview	308
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9.2, 9.2.2, 9.2.3	Estimate Activity Resources	320
9.3, 9.3.2, 9.3.3	Acquire Resources	328
9.4, 9.4.2, 9.4.3	Develop Team	336
9.5, 9.5.2, 9.5.3	Manage Team	345
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10, Figure 10-1	Project Communications Management Overview	360
10.1, 10.1.2, 10.1.3	Plan Communications Management	366
10.2, 10.2.3	Manage Communications	379
10.3, 10.3.3	Monitor Communications	388
11, Figure 11-1	Project Risk Management Overview	396
11.1, 11.1.3	Plan Risk Management	401
11.2, 11.2.2, 11.2.3	Identify Risks	409
11.3, 11.3.2, 11.3.3	Perform Qualitative Risk Analysis	419
11.4, 11.4.3	Perform Quantitative Risk Analysis	428
11.5, 11.5.3	Plan Risk Responses	437
11.6, 11.6.3	Implement Risk Responses	449
11.7, 11.7.2, 11.7.3	Monitor Risks	453
12, Figure 12-1	Project Procurement Management Overview	460
12.1, 12.1.2, 12.1.3	Plan Procurement Management	466
12.2, 12.2.2, 12.2.3	Conduct Procurements	482
12.3, 12.3.2, 12.3.3	Control Procurements	492
13, Figure 13-1	Project Stakeholder Management Overview	504
13.1 (Entire Section)	Identify Stakeholders	507
13.2, 13.2.2, 13.2.3	Plan Stakeholder Engagement	516
13.3, 13.3.2, 13.3.3	Manage Stakeholder Engagement	523
13.4, 13.4.3	Monitor Stakeholder Engagement	530

This document is only available to those who purchase Rita Mulcahy's™ *PMP® Exam Prep* book directly from RMC Learning Solutions or to those who attend an RMC Learning Solutions *PMP® Exam Prep course*

Exercise Cards: EV Calculations

Cut out the 3 cards for the exercise

→ → →