SOME ANSWERS TO WEEKLY SAMPLE QUESTIONS

These solutions are provided by the text(s) and may not be in complete agreement with what was taught in lectures.

Week 1

Chapter 1, Q2, 3, 4 ,5

2. What is a project, and what are its main attributes? How is a project different from what most people do in their day-to-day jobs? What is the triple constraint? What other factors affect a project?

A project is "a temporary endeavor undertaken to create a unique product, service, or result" (PMBOK® Guide, 2012). In addition to being temporary and unique, other attributes of projects are that they are developed using progressive elaboration, require resources from various areas, should have a primary customer or sponsor, and involve uncertainty. Projects are different from day-to-day activities primarily because they have focused goals and definite beginning and ending dates. The triple constraint is managing scope, time, and cost goals. Other factors that affect a project include quality, risk, human resources, communications, and stakeholders.

3. What is project management? Briefly describe the project management framework, providing examples of stakeholders, knowledge areas, tools and techniques, and project success factors.

Project management is "the application of knowledge, skills, tools, and techniques to project activities in order to meet project requirements" (PMBOK® Guide, 2012). The project management framework graphically shows the process of beginning with stakeholders' needs and expectations, applying the nine project management knowledge areas and various tools and techniques to lead to project success and then enterprise success. For example, if a project were to implement an ERP system for a large company, the stakeholders would include managers and users from many different departments (finance, manufacturing, human resources, IT, etc.), all nine knowledge areas would be important, numerous tools and techniques would be applied (see Table 1-1), and project success might be based on implement key functions by a certain time for a certain cost or having the new system pay for itself within a certain time period.

4. What is a program? What is a project portfolio? Discuss the relationship between projects, programs, and portfolio management and the contributions they each make to enterprise success.

A program is "a group of projects managed in a coordinated way to obtain benefits and control not available from managing them individually" (PMBOK® Guide, 2012) Project portfolio management focuses on managing projects as is as a portfolio of investments that contribute to the entire enterprise's success. Projects are part of programs which are part of portfolios.

5. What is the role of the project manager? What are suggested skills for all project managers and for IT project managers? Why is leadership so important for project managers? How is the job market for IT project managers?

The project manager is ultimately responsible for project success. Many suggested skills are listed in this chapter, including strong leadership skills, organizational skills, technical skills, and many soft skills. IT project managers require the same skills as general project managers, but they should also know something about the technology used for the project and the types of people who work on information technology projects. Leading by example is the most important trait of effective project managers. The job market for information technology project managers continues to remain strong, especially for those with strong business and leadership skills.

Chapter 3, Q1

1. Briefly describe what happens in each of the five project management process groups (initiating, planning, executing, monitoring and controlling, and closing). What types of activities occur before initiating a project?

Descriptions of what happens in each of the five process groups are listed below:

- Initiating includes actions to commit to begin or end projects and project phases. Some deliverables include defining the business need for the project, getting a project sponsor, and selecting a project manager.
- Planning includes creating workable plans for the entire project. Every knowledge area requires development of some plans.
- Executing involves coordinating everyone and everything to carry out the project plans. Deliverables include the products of the project or phase.

- Monitoring and controlling ensures the project objectives are met. Deliverables include monitoring and measuring progress and taking corrective action.
- Closing involves bringing the project to an orderly end. Deliverables include organizational process assets updates and closed procurements.

Before initiating a project, organizations often determine high-level scope, time, and cost constraints for a project, identify the project sponsor, select the project manager, and develop a business case for the project, to name a few.

Chapter 4, Q1

1. Describe project integration management in your own words. How does project integration management relate to the project life cycle, stakeholders, and the other project management knowledge areas?

Project integration management means tying together all of the other aspects involved in a project to make it a success. Integration management relates to the project life cycle in that it is done in all of the project life cycle phases. As the project progresses, integration management becomes more focused. Integration management relates to stakeholders because it requires the project manager to know all of the project stakeholders, to know their interests and concerns about the project, and to manage relationships with them. Integration management pulls together information from all of the other knowledge areas.

Week 2

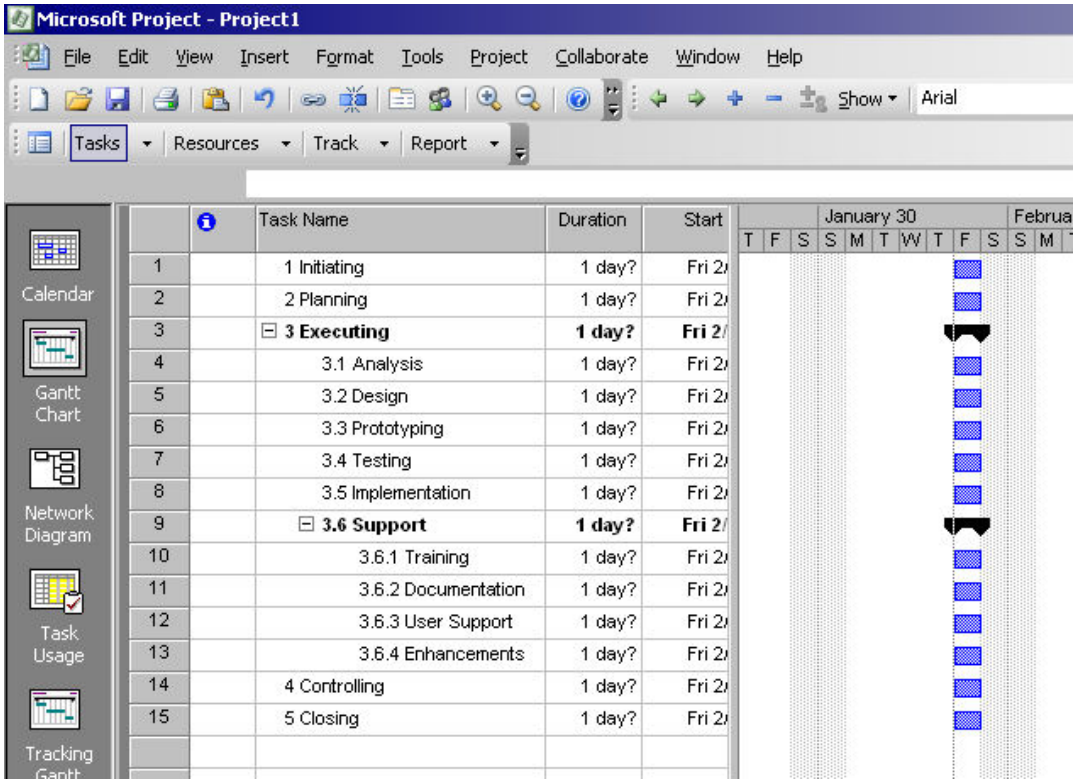
Chapter 5 DQ 1

1. What is involved in project scope management, and why is good project scope management so important on information technology projects?

Scope refers to all the work involved in creating the products of the project and the processed used to create them. Project scope management includes scope planning, scope definition, WBS creation, scope verification, and scope control. Scope management is very important on information technology projects because many projects suffer from unclear requirements and scope creep.

[SS: More information could be put here]

Chapter 5 Exercise 3



Chapter 6 DQ 4, 5 ,6

4. How does activity resource estimating affect estimating activity durations?

The duration of activities will vary based on the resources assigned to them. For example, an expert at an activity should be able to do it in less time than a novice. The number of resources assigned to an activity also affects its estimated duration.

5. Explain the difference between estimating activity durations and estimating the effort required to perform an activity.

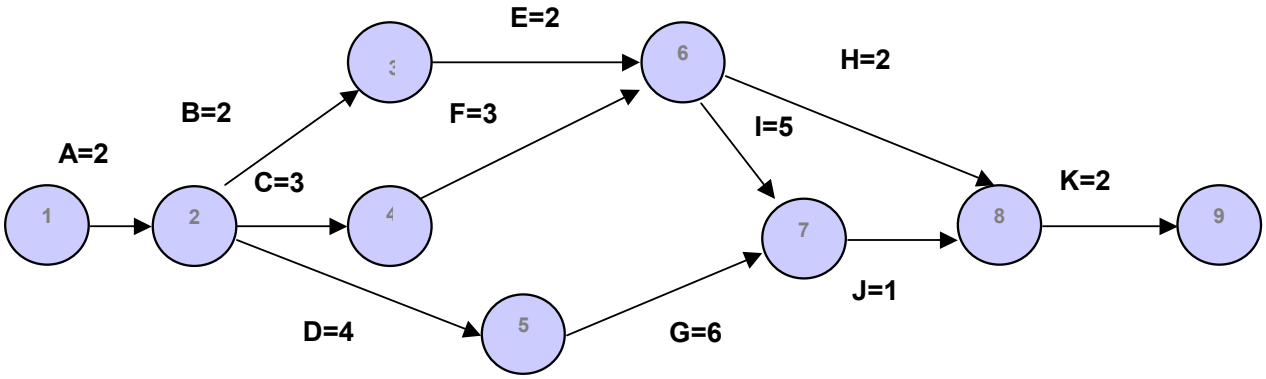
The effort estimate related to how many hours will be spent performing an activity. The activity duration estimate includes the effort as well as how much time passes on a calendar in order to generate the project schedule. For example, an activity might only take 8 work hours to complete, but if it is done one hour per workday, it will take more than a week on the project's Gantt chart.

6. Explain the following schedule development tools and concepts: Gantt charts, critical path method, PERT.

A Gantt chart displays a project schedule in a calendar format. The critical path for a project determines the earliest completion time for a project. PERT is a network analysis technique where you apply a weighted average to determine the duration estimate for tasks.

Chapter 6 Ex 2 and 3

2. a.



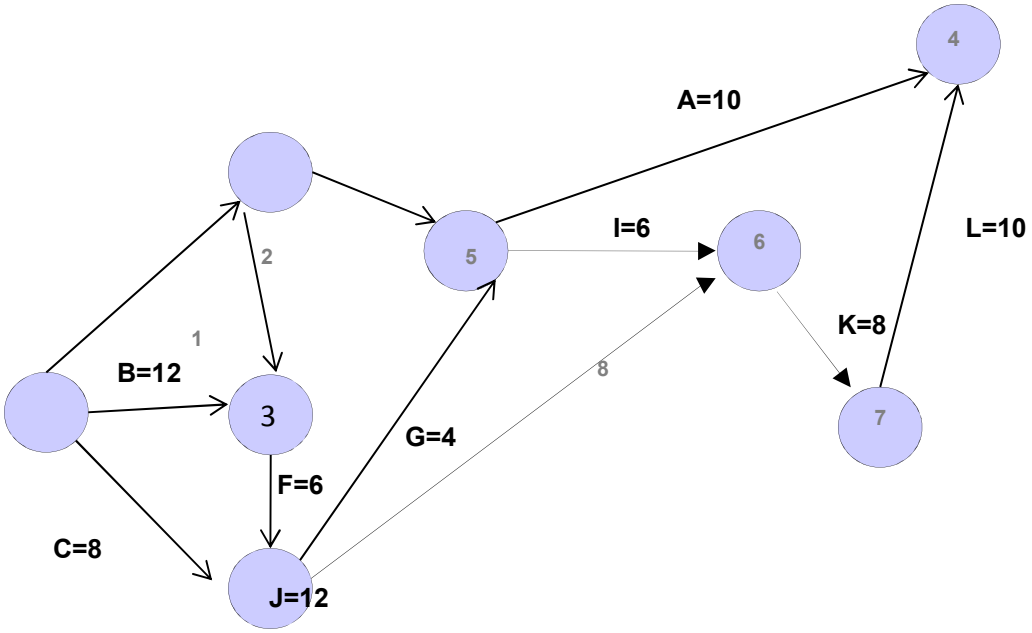
b.

Path 1:	A-B-E-H-K	Length = 2+2+2+2+2 = 10 days
Path 2:	A-B-E-I-J-K	Length = 2+2+2+5+1+2 = 14 days
Path 3:	A-C-F-H-K	Length = 2+3+3+2+2 = 12 days
Path 4:	A-C-F-I-J-K	Length = 2+3+3+5+1+2 = 16 days
Path 5:	A-D-G-J-K	Length = 2+4+6+1+2=15 days

c. The critical path is A-C-F-I-J at 16 days

d. 16 days

3. a.



b.

Path 1:	A-E-J	Length = 10+8+12=30 weeks
Path 2:	A-E-I-K-L	Length = 10+8+6+8+10=42 weeks
Path 3:	A-D-F-G-J	Length = 10+4+6+4+12=36 weeks
Path 4:	A-D-F-G-I-K-L	Length = 10+4+6+4+6+8+10=48 weeks
Path 5:	A-D-F-H-K-L	Length = 10+4+6+8+8+10=46 weeks
Path 6:	B-F-G-J	Length = 12+6+4+12=34 weeks
Path 7:	B-F-G-I-K-L	Length = 12+6+4+6+8+10=46 weeks
Path 8:	B-F-H-K-L	Length = 12+6+8+8+10=44 weeks
Path 9:	C-G-J	Length = 8+4+12=24 weeks
Path 10:	C-G-I-K-L	Length = 8+4+6+8+10=36 weeks
Path 11:	C-H-K-L	Length = 8+8+8+10=34 weeks

c. The critical path is A-D-F-G-I-K-L at 48 weeks.

d. 48 weeks

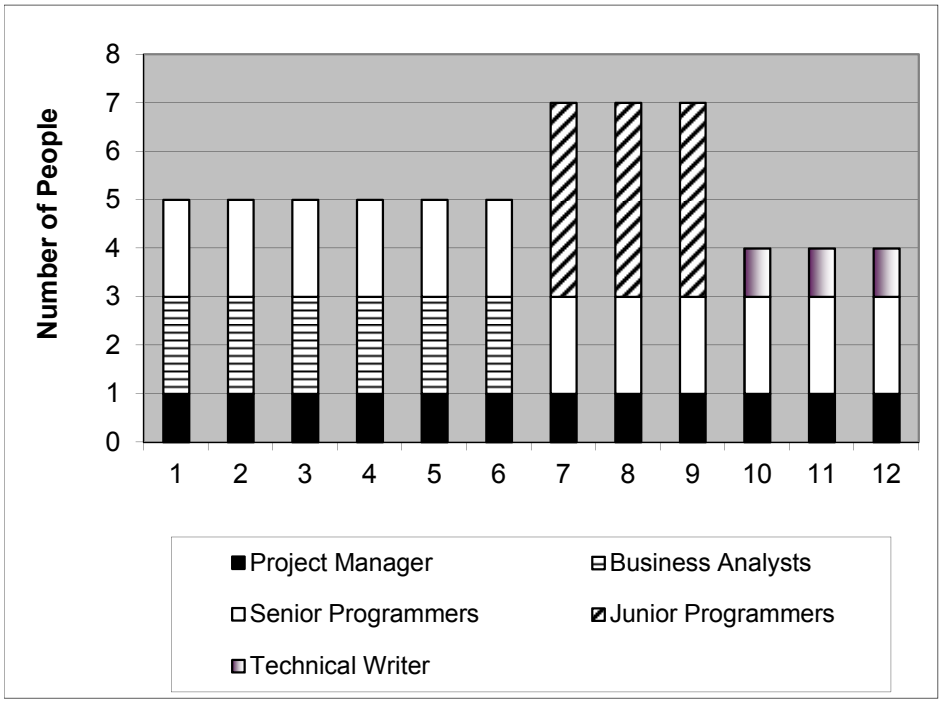
Week 4

Chapter 9 DQ 5

Discuss the difference between resource loading and resource leveling and provide an example of when you would use each technique.

Resource loading helps you see what people are scheduled to work on projects and when they are scheduled to work. Resource leveling helps you to smooth out resource allocations and reduce scheduling conflicts. Both of these techniques make it easier to manage human resources.

Ch 9, Ex 3



Week 6

Chapter 11, Ex 1 & 4

1. Answers will vary. Potential risks might include employee resistance to the new system; opposition to the new system from the human resources department (since some of their people might lose their jobs); technical risks in developing or implementing the system; operational risks if people do not use the system or update their information; and security risks if users provide false information or give their passwords to others. Strategies for mitigating risks will vary. Positive risks might include saving money on human resource functions, having more up-to-date information available, etc.

4. Below are the EMV calculations. Answers to the question about which projects you would bid on might vary based on personal risk tolerance. Just based on EMV, all of the projects have positive numbers, but Project 1 is the highest.

	Change of Winning	Estimated Profits/Losses	Product
Project 1	50%	$120,000	$60,000
	50%	($50,000)	($25,000)
		EMV	**$35,000**
Project 2	30%	$100,000	$30,000
	40%	$50,000	$20,000
	30%	($60,000)	($18,000)
		EMV	**$32,000**
Project 3	70%	$20,000	$14,000
	30%	($5,000)	($1,500)
		EMV	**$12,500**
Project 4	30%	$40,000	$12,000
	30%	$30,000	$9,000
	20%	$20,000	$4,000
	20%	($50,000)	($10,000)
		EMV	**$15,000**

Week 7

Chapter 7, Ex 1 and 5

1. a.

- Cost variance = EV-AC=$20,000 - $25,000 = -$5,000
- Schedule variance = EV-PV=$20,000-$23,000=-$3,000
- CPI=EV/AC=$20,000/$25,000 =80% or .8
- SPI=EV/PV=$20,000/$23,000=87% or .87

b. The project is over budget and behind schedule.
c. EAC=BAC/CPI=$120,000/.8=$150,000
The project is performing worse than planned since the new estimate to complete it is $30,000 more than planned.

5. Below is one potential spreadsheet layout. The profits for each scenario should be as shown, but students may have different spreadsheet designs. You can access the Excel file named ex7-5.xls.

Projected Revenues						
# people	10	20	30	40	50	60
price/person	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
Total	**$ 6,000**	**$ 12,000**	**$ 18,000**	**$ 24,000**	**$ 30,000**	**$ 36,000**
Projected Expenses						
Room fee	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
Registration setup fee	$ 400	$ 400	$ 400	$ 400	$ 400	$ 400
Postcard design	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Registration variable costs	$ 50	$ 100	$ 150	$ 200	$ 250	$ 300
Credit card processing variable costs	$ 240	$ 480	$ 720	$ 960	$ 1,200	$ 1,440
Postcard variable costs	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000
Postcard mailing and postage	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Beverages and lunch	$ 250	$ 500	$ 750	$ 1,000	$ 1,250	$ 1,500
Class handouts	$ 300	$ 600	$ 900	$ 1,200	$ 1,500	$ 1,800
Total	**$ 5,040**	**$ 5,880**	**$ 6,720**	**$ 7,560**	**$ 8,400**	**$ 9,240**
Projected Profits	**$ 960**	**$ 6,120**	**$ 11,280**	**$ 16,440**	**$ 21,600**	**$ 26,760**
Value of personal time/hour	**$ 6.40**	**$ 40.80**	**$ 75.20**	**$ 109.60**	**$ 144.00**	**$ 178.40**
Variable costs						
Registration	$ 50	$ 100	$ 150	$ 200	$ 250	$ 300
Credit card processing	$ 240	$ 480	$ 720	$ 960	$ 1,200	$ 1,440
Postcards	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ 2,000
Postcard mailing and postage	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Beverages and lunch	$ 250	$ 500	$ 750	$ 1,000	$ 1,250	$ 1,500
Class handouts	$ 300	$ 600	$ 900	$ 1,200	$ 1,500	$ 1,800
Unit costs and other info						
# postcards made	5,000	5,000	5,000	5,000	5,000	5,000
# postcards mailed	4,000	4,000	4,000	4,000	4,000	4,000
Registration/person	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00
Credit card fee/person (4% * fee ($600)	$ 24.00	$ 24.00	$ 24.00	$ 24.00	$ 24.00	$ 24.00
Postcards (each)	$ 0.40	$ 0.40	$ 0.40	$ 0.40	$ 0.40	$ 0.40
Postcard mailing and postage (each)	$ 0.25	$ 0.25	$ 0.25	$ 0.25	$ 0.25	$ 0.25
Beverages and lunch/person	$ 25.00	$ 25.00	$ 25.00	$ 25.00	$ 25.00	$ 25.00
Class handouts/person	$ 30.00	$ 30.00	$ 30.00	$ 30.00	$ 30.00	$ 30.00
Person hours spent	150	150	150	150	150	150

Week 8

Chapter 4, DQ 5

Discuss the importance of following a well-integrated change control process on IT projects. What consequences can result from not following these best practices? What types of change control would be appropriate for small IT projects? What types of change control would be appropriate for large ones?

Answers will vary. One answer might be that it is important to follow a good integrated change control process on IT projects to avoid scope creep, incompatibility problems, and to make effective use of resources and new technologies. Additional suggestions for managing integrated change control might include locating key project stakeholders, assigning users to project teams, and providing team-based incentives for effectively managing project changes. Larger projects obviously need more change control than smaller ones. Larger projects would probably have formal change control forms and a change control board, while a smaller project might need less formal processes, such as just the project manager's or sponsor's approval in a verbal or written form.

Chapter 10, DQ 4,5,6,9

4. What items should a communications management plan address? How can a stakeholder analysis assist in preparing and implementing parts of this plan?

A communications management plan should address stakeholder communications requirements, information to be communicated, who will receive and produce the communications, suggested methods or technologies, frequency of communication, escalation procedures for resolving issues, revision procedures, and a glossary of terms. A stakeholder analysis shows which stakeholders should get which written communications and in what format. Stakeholders should assist in determining this information by clarifying their specific communications needs.

5. Discuss the advantages and disadvantages of different ways of distributing project performance information.

Answers will vary. Electronic communications are often useful when it is important to send information quickly to a large group of people. Face-to-face communications are important for developing relationships and trust with project stakeholders. Formal written communications are important for documenting legal and other crucial information. Verbal communications are very important for many people who prefer to communicate verbally and ask specific questions rather than read information.

6. What are some of the ways to create and distribute project performance information?

Project performance information can be distributed verbally, in written format, via e-mail, via the web, formally, and informally.

9. How can software assist in project communications? How can it hurt project communications?

Answers will vary. Software can assist in project communications by helping to create and distribute project information. Project 2010 has several features to enhance project communications, and many other tools are available. Software can hurt project communications if people rely too heavily on using software alone to communicate. It is very important to have meetings and informal communications on projects, too

Week 9

The solutions to the solved questions are in the text

Pinto 2012, Chapter 10, unsolved problems 3

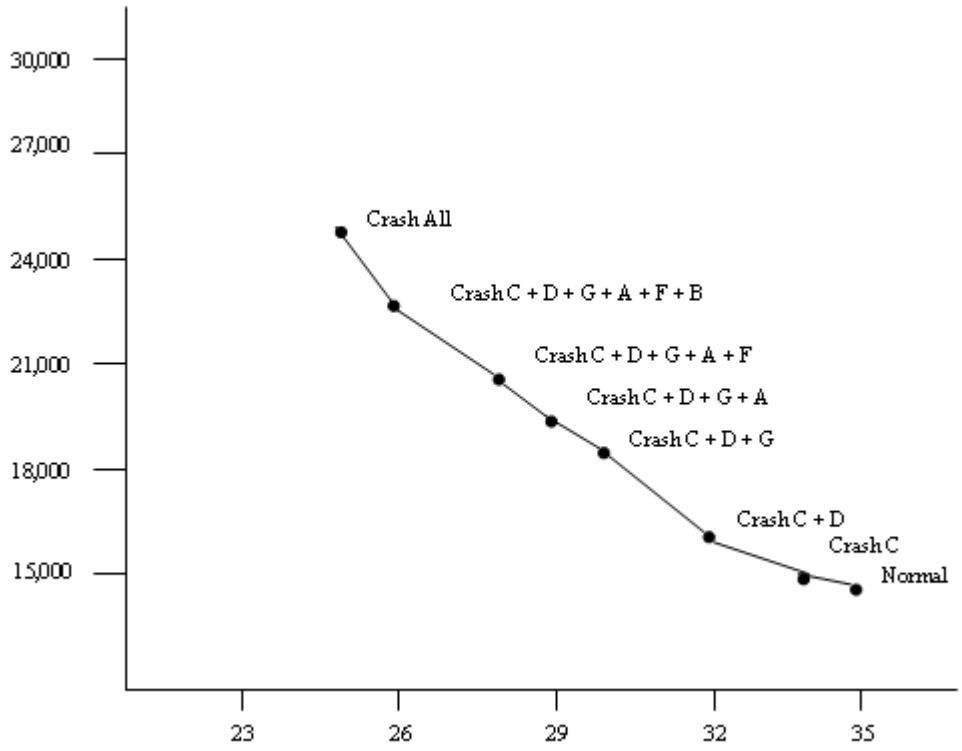
a. Applying the formula for crashing, the per day costs for crashing each activity is:

Activity	Per Day Cost
A	$1,000
B	$1,250
C	$450
D	$750
E	$1,500
F	$1,000
G	$900

b. The most attractive candidates for crashing (assuming we know nothing of critical activities) are those with the lowest per day cost to crash. In this case, we would crash the activities in order: C, D, G, A and F, B, E.

c. In solving for this question, it is important to remember that all activities are considered to be on the critical path. Thus, there is no reason to exclude certain activities from crashing because they are not critical. We can create a table of activities crashed, total project length, and total costs as follows:

Activity Crashed	**Duration**	**Total Costs**
Normal (none crashed)	35 days	$14,750
C	34	15,200
D	32	16,700
G	30	18,500
A	29	19,500
F	28	20,500
B	26	23,000
E (All crashed)	25	24,500



Pinto 2012, Chapter 10, unsolved problems 4

Solved in class on the lecture slide.

Week 10

Chapter 8, DQ 1 & 2

1. Answers may vary
2. What are the main processes included in planning project quality management?

The project quality management processes include planning quality management, performing quality assurance, and performing quality control.

Chapter 12, DQ 4 & 5

4. How do organizations decide whom to send RFPs or RFQs?

Organizations often use a preferred sellers list, but there are several ways to decide who to ask to do outside work for projects.

5. How can organizations use a weighted decision matrix to evaluate proposals as part of seller selection?

Organizations can decide on key criteria for selecting sellers, weight each criterion, enter scores for each seller, and then determine a weighted score.

Week 11

Chapter 2, DQ 5

5. Discuss the importance of top management commitment and the development of standards for successful project management. Provide examples to illustrate the importance of these items based on your experience on any type of project.

Top management commitment is the number one factor associated with the success of information technology projects, so it's very important to get and maintain this support. Top management can help project managers get adequate resources, approve unique project needs, get cooperation from other parts of the organization, and provide support as a mentor and coach to project managers. Examples will vary.

Chapter 4, Ex 4

Discount rate	**9.00%**					
Assume the project is completed in Year 0			**Year**			
	0	**1**	**2**	**3**	**Total**	
Costs	**200,000**	**30,000**	**30,000**	**30,000**		
Discount factor	1.00	0.92	0.84	0.77		
Discounted costs	**200,000**	**27,600**	**25,200**	**23,100**	**275,900**	
Benefits	**0**	**100,000**	**100,000**	**100,000**		
Discount factor	1.00	0.92	0.84	0.77		
Discounted benefits	**0**	**92,000**	**84,000**	**77,000**	**253,000**	
Discounted benefits - costs	(200,000)	64,400	58,800	53,900	**(22,900)**	← **NPV**
Cumulative benefits - costs	(200,000)	(135,600)	(76,800)	(22,900)		
ROI →	**-8%**					
	Payback does not occur.					

The NPV and ROI are both negative, and payback does not occur. Based on the financials, this project is not a good investment.

Chapter 13, DQ 3

3. What are some ways to manage a stakeholder relationship closely? Give examples of how you might manage relationships differently based on the unique personalities of different people.

Answers will vary, but managing a relationship closely usually involves more time and communications. You might meet with the stakeholder more often or communicate in other ways. There are many ways to work with unique personalities. Some people need a lot of attention and small talk, while others prefer a more direct approach, for example.

Week 12

There are no solutions for the given questions.