

Tutorial 4: Assigning Resources and Costs

TRUE/FALSE

1. A significant component to planning and managing your project is accurately controlling and tracking cost and resource data.
2. As a project progresses, you can update cost and time estimates so they are in better alignment with the actual costs and time allocations of the project.
3. Unlike other sheet views, the Resource Sheet view presents information in an easy-to-use row and column format.
4. You edit entries in the Resource Sheet view by clicking the cell that you want to edit and then typing the change or by choosing an option from the drop-down list associated with the selected cell.
5. Dates entered in the Resource Availability section on the General tab identify when a resource is available and what percentage of that resource is available during those dates.
6. After the resource data has been entered into a project, you can start assigning resources to specific tasks.
7. The Task Usage view shows tasks with assigned resources indented below each task on the left and the number of hours of each resource that is assigned to each task in a day-by-day format on the right.
8. Total work is calculated based on the initial resource assignment and is not recalculated when the task duration changes.
9. In Project 2007, as in all previous versions of Microsoft Project, it is assumed that the duration remains constant and that work changes when additional resources are added to a task.
10. The assumption that Project 2007 makes when adding new work resources is that the resources have equivalent capabilities to perform the task.
11. Even when effort-driven scheduling is turned off and a new resource is added to a task with an existing resource assignment, the work continues to drive the assignment.
12. Creating new resources by directly entering them in the Resource Work form provides a field to enter their hourly costs.

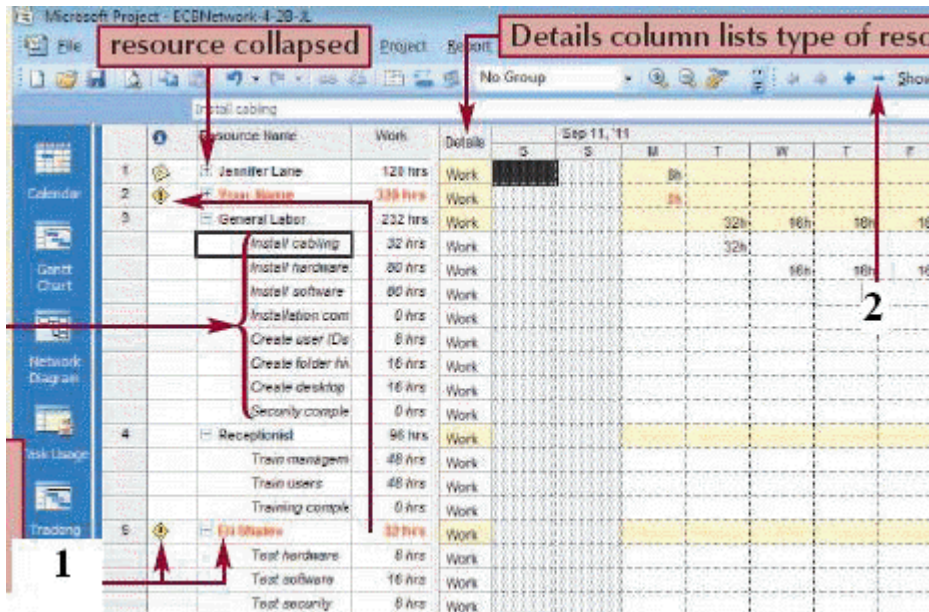
13. You can expand and collapse individual resources within the Resource Usage view just as you expand and collapse summary tasks within a Task Entry table.
14. You sort Resource Sheets in the same way you sort Task Sheets, using the same sort fields.
15. Work and material costs are assigned to tasks differently.
16. The Resource Cost form is often used to enter and assign resources, regardless of whether they are work or material resources, so you can view the associated costs.
17. Two ways to show summary information for a project include reviewing the project's properties and adding a project summary bar.
18. After you have entered the initial tasks, durations, relationships, resource assignments, and fixed costs, you will find that reviewing the project properties is very valuable because they present summary cost and date statistics for the entire project.
19. Total slack is a synonym for free slack.
20. Whenever you are working with a project that appears to calculate the critical path incorrectly, apply the Schedule table to the Task Entry table and check total slack to see if it is positive.

MODIFIED TRUE/FALSE

1. In Resource Sheet view, each column contains all the fields of information about one resource.

2. Entering dates in the Calendar section on the General tab in the Resource Information dialog box may be useful if you are hiring additional units of an existing resource midway through the project, for example. _____
3. The fastest method of assigning resources to specific tasks is to use the Assign Resources button on the Standard toolbar. _____
4. Duration-driven scheduling means that adding additional resources redistributes the work and changes the duration. _____
5. In terms of the relationship between $\text{work} = \text{duration} * \text{units}$ when changes are made to a task after a resource assignment, if you modify or add a new resource, the work changes to balance the formula.

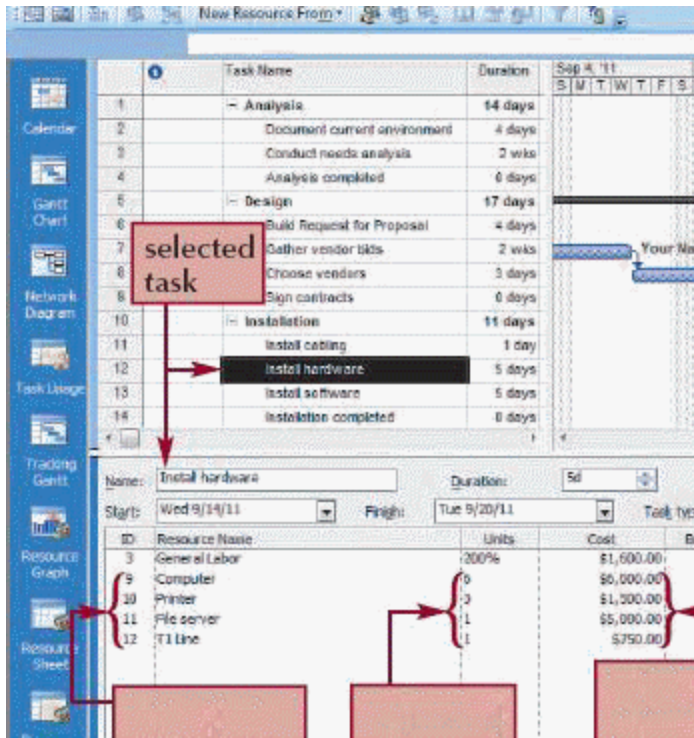
6. In terms of the relationship between work=duration * units when changes are made to a task after a resource assignment, if you modify or add work, the duration changes to balance the formula.
-



7. The item marked 1 in the figure above is a(n) overallocated resource. _____
8. To create a customized group, you have to open the Group Tasks dialog box.

9. By default, the Resource Schedule form is displayed in the top of the Task Entry view.

10. The Automatic option in the Resource Leveling dialog box levels the project after you click the Level Now button. _____



11. The items indicated in the figure above are work resource assignments. _____
12. The Options dialog box contains a number of important default setting choices and provides a way to display a project summary task bar. _____
13. A project property is a characteristic of the entire project. _____
14. When project managers discuss slack, they are generally referring to free slack.

15. Any positive value in the Total Slack field will make a task critical. _____

MULTIPLE CHOICE

1. ____ costs can be associated with labor costs or material consumable resources.
 - a. Variable
 - b. Fixed
 - c. Budgetary
 - d. Resource
2. Insurance and legal fees are examples of ____ costs associated with a task.
 - a. variable
 - b. fixed
 - c. linked
 - d. budgetary
3. By default, the ____ table is applied to the Resource Sheet.
 - a. Cost
 - c. Entry

- b. Hyperlink
- d. Summary
4. A resource is the ____ used to complete the tasks in a project.
- a. person(s)
 - b. equipment
 - c. materials
 - d. Any of the above
5. ____ is a choice in the Type field in Resource Sheet view.
- a. Work
 - b. Material
 - c. Equipment
 - d. Both A and B
6. In Resource Sheet view, the Entry table's ____ field automatically displays small icons to represent various conditions about the resource.
- a. Conditions
 - b. Units
 - c. Code
 - d. Indicator
7. In Resource Sheet view, the Entry table's ____ field contains the one-time cost per use for a single resource of the given type.
- a. Cost/Use
 - b. Single Use
 - c. One-Time Cost
 - d. Accrue At
8. In Resource Sheet view, the Entry table's ____ field determines when the costs associated with a resource will be applied to any task to which it has been assigned.
- a. Cost/Use
 - b. Accrue At
 - c. Calendar
 - d. Std. Rate
9. In Resource Sheet view, the Entry table's ____ field contains any code, number, or abbreviation you want to enter to help identify that resource.
- a. Identification
 - b. Abbreviation
 - c. Code
 - d. Initials
10. In Resource Sheet view, a(n) ____ icon means that a resource needs to be leveled.
- a. question mark
 - b. red bullet
 - c. black bullet
 - d. exclamation point
11. In Resource Sheet view, resources with associated hourly costs are ____ types.
- a. Work
 - b. Material
 - c. Hourly
 - d. Cost/Use
12. In Resource Sheet view, resources such as supplies are ____ types.
- a. Work
 - b. Material
 - c. Supply
 - d. Provisional
13. By default, the Max. Units field is ____.
- a. 0%
 - b. 50%
 - c. 100%
 - d. 200%

14. If a resource entry represents two people, the Max. Units entry in Resource Sheet view will be ____.
- a. 2%
 - b. 50%
 - c. 100%
 - d. 200%
15. In the Std. Rate field in Resource Sheet view, rate entries are costs per ____.
- a. hour
 - b. day
 - c. month
 - d. week
16. Three choices are available for the ____ field in Resource Sheet view: Start, Prorated, and End.
- a. Base Calendar
 - b. Accrue At
 - c. Cost/Use
 - d. Std. Rate
17. ____ is the default entry for the Accrue At field.
- a. Standard
 - b. Hourly
 - c. Prorated
 - d. Material
18. ____ is the default choice for the Base Calendar field.
- a. Night Shift
 - b. 24 Hours
 - c. Base
 - d. Standard
19. Which of the following is a tab in the Resource Information dialog box?
- a. Costs
 - b. Finances
 - c. Standard
 - d. Comments
20. Which of the following is NOT a tab in the Resource Information dialog box?
- a. General
 - b. Names
 - c. Custom Fields
 - d. Costs
21. The ____ button in the Resource Information dialog box lets you work collaboratively with members of the team if you are using Microsoft Project Server.
- a. Collaborate
 - b. Project Server
 - c. Windows Account
 - d. Share Information
22. Which of the following can you change directly in Resource Sheet view as well as in the Resource Information dialog box?
- a. notes
 - b. email
 - c. resource availability
 - d. initials
23. Which of the following is available only in the Resource Information dialog box?
- a. Cost rate tables
 - b. Group
 - c. Code
 - d. Type
24. For which of the following are grouping options available?
- a. No Group
 - b. Complete and Incomplete Resources
 - c. Resource Group
 - d. All of the above

Resource name: Initials:

Email: Group:

Code:

Booking type: Type:

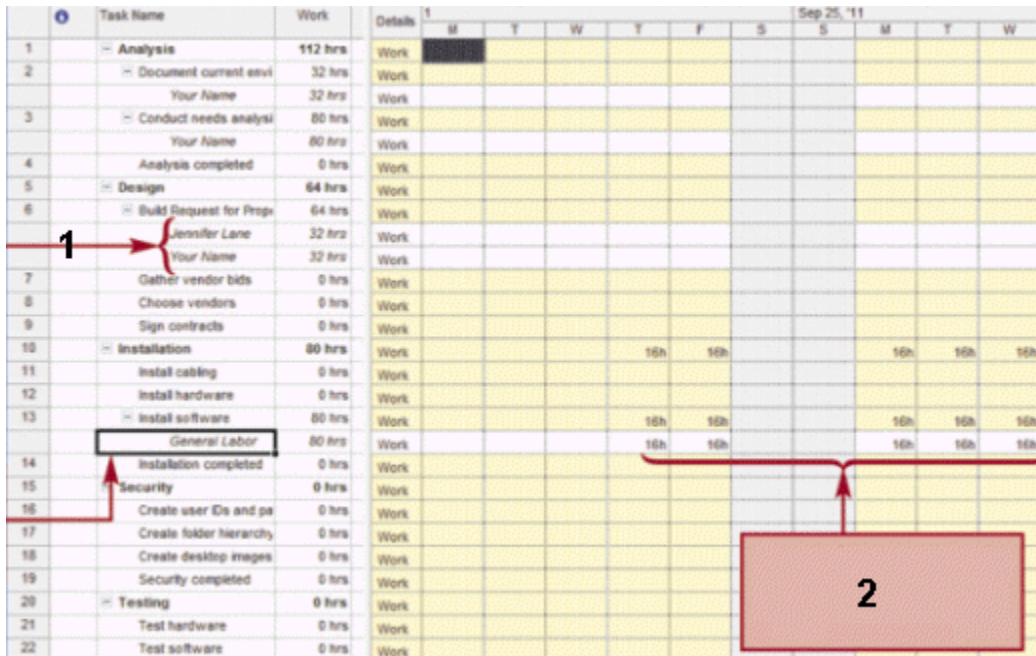
Default Assignment Owner:

2 Resource Availability

Available From	Available To	Units
NA	11/30/2011	100%
12/1/2011	1/1/2012	

1

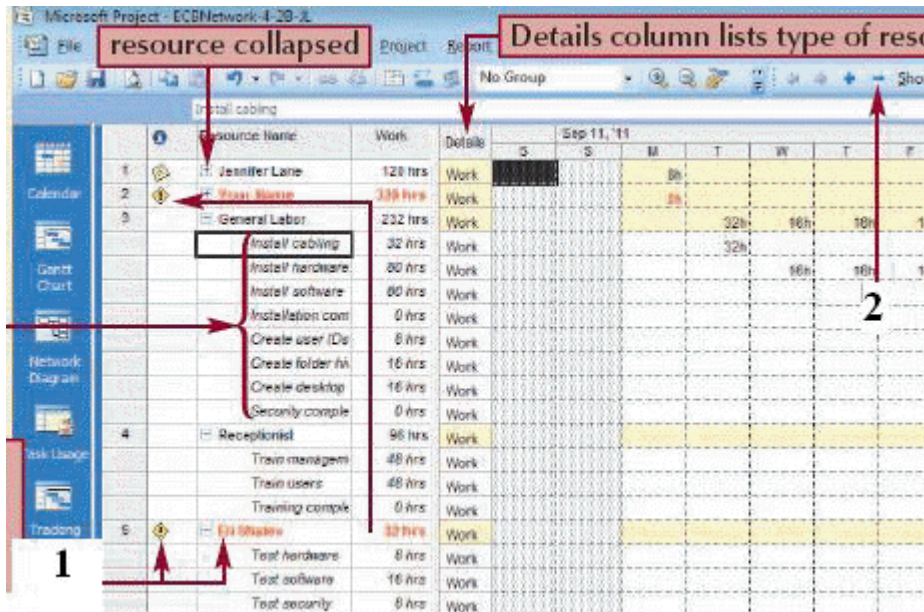
25. The item marked 1 in the figure above is the ____ button.
- Delete
 - Enter
 - Resource
 - Link
26. The item marked 2 in the figure above is the ____ bar.
- Resource
 - Standard
 - Entry
 - Availability



27. The view shown in the figure above is ____ view.
- Resource Sheet
 - Gantt Chart
 - Vendor
 - Task Usage
28. The view in the accompanying figure shows tasks with ____ indented below each task on the left.
- cost rate table
 - resource sheet
 - number of hours
 - assigned resources

29. Which resource has been assigned to the Install software task in the accompanying figure?
- a. Jennifer Lane
 - b. General Labor
 - c. Installation Team
 - d. The assignment has not yet been made.
30. According to the item marked 2 in the accompanying figure, what would be the correct value for units assigned?
- a. 50%
 - b. 100%
 - c. 200%
 - d. It is impossible to tell from the current view.
31. If you double-click General Labor in the accompanying figure, the ____ dialog box opens.
- a. General Labor
 - b. Assignment Information
 - c. Work Resource
 - d. Assigned Resources
32. If one resource is assigned to a task with a duration of 1 day, the total work would be ____.
- a. 8 hours
 - b. 1/7 week
 - c. 1/30 month
 - d. Any of the above
33. Total work for a task is initially calculated as the task duration (converted to ____) multiplied by the number of resources assigned to that task.
- a. days
 - b. hours
 - c. minutes
 - d. weeks
34. What is the formula for calculating work?
- a. $\text{Work} = \text{Effort} * \text{Units}$
 - b. $\text{Work} = \text{Duration} * \text{Units}$
 - c. $\text{Work} = \text{Duration} / \text{Effort}$
 - d. $\text{Work} = \text{Effort} / \text{Units}$
35. Before resources are assigned, work equals ____ in the $W = D * U$ formula.
- a. -1
 - b. 0
 - c. 1
 - d. null
36. Given the relationship between work, duration, and units, when changes are made to duration, what changes to balance the relationship?
- a. time
 - b. effort
 - c. work
 - d. units
37. ____ duration means that a task's work, rather than the duration, changes when a new resource is assigned.
- a. Flexible
 - b. Indexed
 - c. Fixed
 - d. Fungible
38. Tasks are, by default, ____-driven.
- a. duration
 - b. time
 - c. unit
 - d. effort

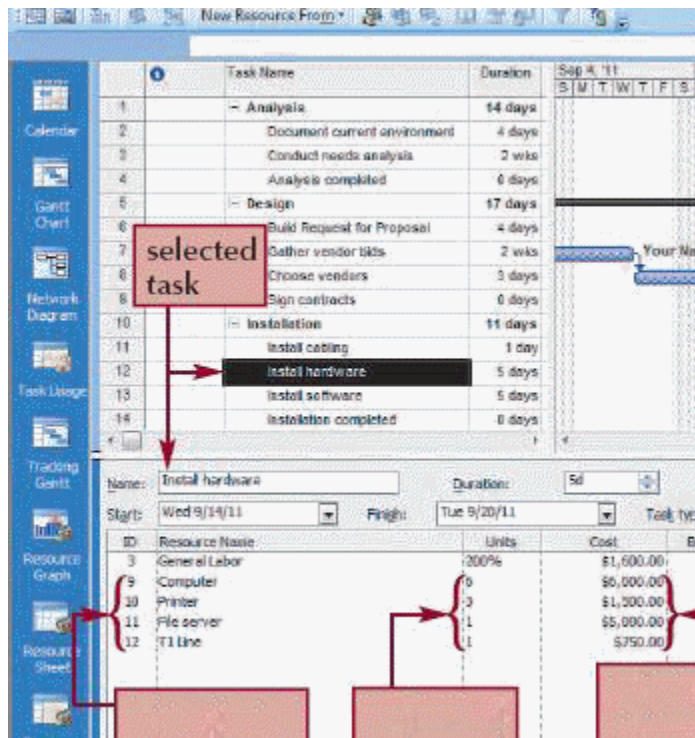
39. In terms of the relationship between work=duration * units when changes are made to a task after a resource assignment, if you modify or add units on an existing resource, the ____ changes to balance the formula.
- work
 - task
 - duration
 - resource
40. Meetings and seminars should have ____ durations.
- fixed
 - flexible
 - fungible
 - effort-driven
41. To change a task from effort-driven to fixed duration, clear the ____ check box on the Advanced tab of the Task Information dialog box or in the Resource form.
- Duration
 - Effort driven
 - Dynamic
 - Transition
42. Resource Usage view is similar to ____ view.
- Gantt Chart
 - Resource Sheet
 - Task Usage
 - All of the above
43. In Resource Usage view, a(n) ____ column displays the total hours assigned for each resource and the number of hours for each assigned task.
- Resource Hours
 - Assignment Hours
 - Labor
 - Work
44. In Resource Usage view, resources in ____ are overallocated.
- red
 - black
 - grey
 - green



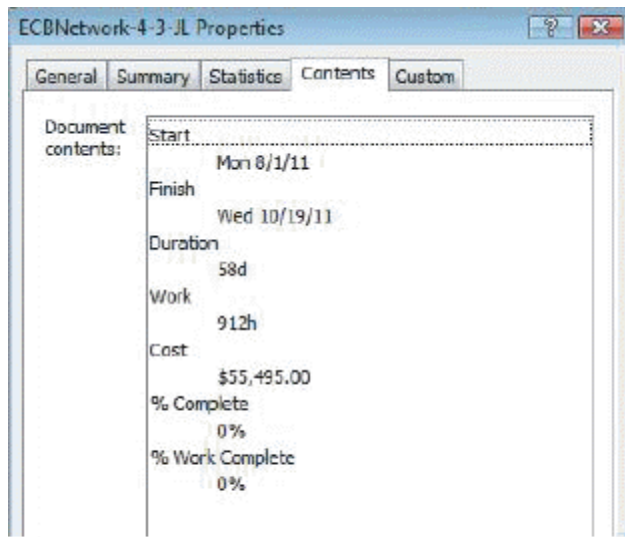
45. The item marked 2 in the figure above is the ____ button.

- a. Collapse Columns
 - b. Hide Subtasks
 - c. Suppress Tasks
 - d. Level
46. You can expand and collapse individual resources within the view in the accompanying figure just as you can expand and collapse ____ tasks within a task Entry table.
- a. indexed
 - b. baseline
 - c. summary
 - d. milestone
47. One way to filter Resource Sheets is to use the ____ button.
- a. Display/Hide
 - b. Sort
 - c. AutoFilter
 - d. Either A or B
48. ____ means to correct overallocations so that no resource is assigned more work than is available in the given time period.
- a. Slacking
 - b. Reallocating
 - c. Fast tracking
 - d. Leveling
49. Any time that a ____ is not responding as expected, double-click it to open its corresponding information dialog box to examine its characteristics.
- a. resource
 - b. task
 - c. relationship
 - d. Any of the above
50. You can clear leveling in ____ view.
- a. Network Diagram
 - b. Leveling Gantt
 - c. Reallocation
 - d. All of the above
51. When you click the ____ button in the Resource Leveling dialog box, you have the choice of either leveling the Entire pool of resources or Selected resources.
- a. Reallocate
 - b. Level Now
 - c. Add Slack
 - d. Fast Track
52. The Gantt chart uses ____ bars to represent the schedule for a preleveled task.
- a. red
 - b. blue
 - c. green
 - d. black
53. The Gantt chart uses ____ bars to represent the new schedule for a leveled task.
- a. red
 - b. green
 - c. black
 - d. blue
54. A(n) ____ cost is a cost associated with items like cabling, supplies, or computers.
- a. material
 - b. fixed
 - c. fungible
 - d. indexed
55. Room charges and convention entry fees are examples of ____ costs.
- a. material
 - b. fixed
 - c. base
 - d. indexed

56. The default resource type on a Resource sheet is ____.
- Material
 - Fixed
 - Work
 - Basic



57. If you double-click Printer in the accompanying figure, the ____ dialog box opens.
- Technology
 - Equipment
 - Resource Information
 - Tools and Options
58. In the Options dialog box, the ____ tab includes such items as whether Help is automatically loaded, for example.
- Help
 - Workgroup
 - Edit
 - General
59. In the Options dialog box, the ____ tab includes unit of measure abbreviations and hyperlink options, for example.
- Edit
 - Measurement
 - Links
 - General
60. In the Options dialog box, the ____ tab contains defaults for duration and work units, effort-driven status, and estimated duration settings.
- Duration
 - Schedule
 - Time
 - Calendar



61. Which of the tabs in the accompanying figure allows you to find out when a project file was last modified?
 - a. General
 - b. Summary
 - c. Custom
 - d. Statistics

62. Which of the tabs in the accompanying figure allows you to find out the total file-editing time for a project?
 - a. General
 - b. Summary
 - c. Custom
 - d. Statistics

63. Which of the tabs in the accompanying figure allows you to improve the organization of your files?
 - a. General
 - b. Summary
 - c. Custom
 - d. Statistics

64. In the Schedule table, the ____ field is the number of days that a task could be delayed without affecting its successor task.
 - a. Total Slack
 - b. Late Start
 - c. Free Slack
 - d. Late Finish

65. In the Schedule table, when the ____ field is calculated as zero, the task is critical and the Start/Late Start and Finish/Late Finish dates are the same.
 - a. Total Slack
 - b. Start Slack
 - c. Finish Slack
 - d. Free Slack

66. ____ hours are work hours outside of those specified by the calendar.
 - a. Flexible
 - b. Fungible
 - c. Overtime
 - d. Baseline

67. The ____ report provides a weekly summary of task costs.
- a. Task Costs
 - b. Summary Costs
 - c. Cash Flow
 - d. Task Usage
68. The ____ report lists the tasks assigned for a single resource in a weekly organization, showing task details such as duration, schedule Start and Finish dates, and predecessors.
- a. Who Does What
 - b. Organization
 - c. Predecessors
 - d. To-Do List
69. The ____ report lists each resource and its associated tasks.
- a. Who Does What When
 - b. Task Costs
 - c. Task Usage
 - d. Resource Usage
70. Which of the following is most similar to the Task Usage report?
- a. Work Usage
 - b. Who Does What When
 - c. Who Does What
 - d. Resource Usage

Case-Based Critical Thinking Questions

Case 4-1

Tatiana is building out the details of her project in Resource Sheet view for the first time, so she turns to her colleague Angela for help with the trickier aspects of the work.

71. One of Tatiana's resources is a two-person freelance design firm, in which both designers can be counted on as contributing to this project. According to Angela, what is the most accurate entry in the Max. Units field in light of this availability?
- a. 2
 - b. Double
 - c. 50%
 - d. 200%
72. Which of the following is NOT an accurate statement Angela can make to Tatiana about the Type field?
- a. The Type field specifies whether a resource is a Work, Material, or Cost resource.
 - b. All costs assigned must be based on work time.
 - c. Using cost resources allow Tatiana to monitor project financials and keep the project in sync with their accounting systems.
 - d. Tatiana can use the Type field to filter and find Work, Material, and Cost resources.
73. The photographer Tatiana has hired charges by the day. What does she need to do in the Resource Sheet view to accommodate this?
- a. Change the Base Calendar to the daily calendar.
 - b. Enter "per day" as the Cost/Use value.
 - c. Override the Std. Rate default with the /d setting.
 - d. Nothing: this is the default setting.
74. Tatiana is looking for the ability to determine when the costs associated with one of her resources will be applied to a task to which it has been assigned. To what field does Angela refer her?
- a. Accrue At
 - b. Material Label
 - c. Cost/Use
 - d. Indicators

75. Tatiana and the team will be pushing hard on the project in its final week, and she needs to change the calendar on which the resource calendar is based to accommodate night shifts. If she has never before changed the calendar, what is it set to by default?
- a. Standard
 - b. Night Shift
 - c. 24 Hours
 - d. Basic

Case-Based Critical Thinking Questions

Case 4-2

In your role as project manager, you have two available resources, Simone and Sydney, to bring to bear on a series of tasks. You are experimenting with what happens as you introduce them at various points in the workflow.

76. Assume effort-driven scheduling is in place. Which of the following does NOT happen when Sydney is added as a new resource assignment on a task to which Simone has been assigned?
- a. Work remains constant.
 - b. Work is redistributed between Simone and Sydney.
 - c. Duration is increased to balance the $W=D*U$ formula.
 - d. Duration is decreased to balance the $W=D*U$ formula.
77. Assume effort-driven scheduling is again in place, and the task type is Fixed-Duration. Which of the following does NOT happen when Sydney is added as a new resource assignment on the task, to which Simone had previously been assigned?
- a. Work remains constant.
 - b. The duration remains constant.
 - c. Units are reduced to 50% to balance the $W=D*U$ formula.
 - d. The duration doubles in the length.
78. Assume that a Fixed Units task is not effort-driven when Sydney is added as a new resource assignment. Which of the following does NOT happen?
- a. The duration remains constant.
 - b. The work remains constant.
 - c. Adding Sydney to the task doubles the amount of work to balance the $W=D*U$ formula.
 - d. Both A and C
79. A copyediting task to which Simone had been assigned has a duration of two days. You think it will take longer than 16 hours but you need the duration to remain a fixed two days. What can you do?
- a. Change the task type to fixed duration.
 - b. Add more resources to the task.
 - c. Change the dependency type between the copyediting task and its successor task to FF.
 - d. Both A and B
80. If you set one of Sydney's tasks to have a Type of Fixed Work, what happens to the Effort Driven field?
- a. The value changes to No.
 - b. The value changes to Yes.
 - c. The Effort Driven field is null.
 - d. Nothing changes automatically.

COMPLETION

1. A(n) _____ is an expenditure made to accomplish a task.
2. _____ costs are expenses that are associated with a task but do not vary according to the length of the task or the number of resources assigned to it.
3. The _____ is the amount of money that you have allocated for the project based on cost and time estimates.
4. A(n) _____ is the person(s), equipment, or materials used to complete a task in a project.
5. A(n) _____ occurs when a resource has been assigned more work than it can complete on a given day.
6. A(n) _____ icon in the Indicator field of the Entry table in Resource Sheet view indicates that an associated note is stored about the resource.
7. A(n) _____ table is a grid of different hourly and per use costs that can be stored for a single resource.

Task Name		Work	Details 1											
			M	T	W	T	F	S	S	M	T	W		
1	Analysis	112 hrs	Work											
2	Document current envi	32 hrs	Work											
	Your Name	32 hrs	Work											
3	Conduct needs analysi	80 hrs	Work											
	Your Name	80 hrs	Work											
4	Analysis completed	0 hrs	Work											
5	Design	64 hrs	Work											
6	Build Request for Prop	64 hrs	Work											
	Jennifer Lane	32 hrs	Work											
	Your Name	32 hrs	Work											
7	Gather vendor bids	0 hrs	Work											
8	Choose vendors	0 hrs	Work											
9	Sign contracts	0 hrs	Work											
10	Installation	80 hrs	Work				16h	16h			16h	16h	16h	
11	Install cabling	0 hrs	Work											
12	Install hardware	0 hrs	Work											
13	Install software	80 hrs	Work				16h	16h			16h	16h	16h	
	General Labor	80 hrs	Work				16h	16h			16h	16h	16h	
14	Installation completed	0 hrs	Work											
15	Security	0 hrs	Work											
16	Create user IDs and pa	0 hrs	Work											
17	Create folder hierarchy	0 hrs	Work											
18	Create desktop images	0 hrs	Work											
19	Security completed	0 hrs	Work											
20	Testing	0 hrs	Work											
21	Test hardware	0 hrs	Work											
22	Test software	0 hrs	Work											

8. The items marked 1 in the accompanying figure are assigned _____.

9. _____ work for a task is initially calculated as the task duration multiplied by the number of resources assigned to that task.
10. Because tasks are _____ driven, when a new resource is added to a task with an existing resource assignment, total work remains constant and the duration is adjusted to accommodate the redistribution of work across multiple resources.
11. _____ is a task field that refers to what will remain constant when additional resources are added to a task.
12. When Project 2007 _____ a task, it interrupts the work so that the work starts and then stops on the task; there is a period of time when no work is being done on the task, and then work begins on that task again.
13. _____ is the amount of time between the scheduled start for a task and the time when work actually begins on the task.
14. A(n) _____ cost is a cost associated with a consumable item or items.
15. A(n) _____ cost is a cost inherent to a task itself and is not driven by the number of resource assignments made.
16. A resource type of _____ causes a resource cost to be driven by the duration of the task multiplied by the hourly cost of the resource plus the cost per use charges if applicable.
17. A resource type of _____ causes the resource cost to be driven by the number of resource units that have been assigned to the task multiplied by the unit cost of the resource.
18. _____ slack is the amount of time that a task can be delayed without delaying any successor tasks.
19. Adding _____ hours, work hours outside of those specified by the calendar, to resources assigned to critical tasks, is another way to shorten the critical path.
20. _____ slack is the amount of time that a task can be delayed without delaying the project's Finish date.

MATCHING

Identify the letter of the choice that best matches the phrase or definition.

- | | |
|-------------------|-----------------------|
| a. resource | g. level |
| b. cost | h. delay |
| c. variable cost | i. Who Does What |
| d. fixed cost | j. Who Does What When |
| e. budget | k. To-Do List |
| f. overallocation | l. Cash Flow |
1. Determined by the number of resource units assigned to a task as well as the hourly or per use cost for that resource
 2. Expense associated with a task that does not vary according to the length of the task or the number of resources assigned to the task
 3. Shows task details such as duration, scheduled Start and Finish dates, and predecessors
 4. Provides a weekly summary of task costs
 5. Provides the work hours and scheduled Start and Finish dates for each task
 6. Summarizes the number of hours assigned to a task for each day
 7. Occurs when a resource has been assigned more work than it can complete on a given day
 8. An expenditure made to accomplish a task
 9. To correct overallocations so that no resource is assigned more work than is available in the given time period
 10. The amount of time between the scheduled start for a task and the time when work actually begins on the task
 11. The person(s), equipment, or materials used to complete a task in a project
 12. Amount of money allocated for a project based on cost and time estimates