# Resource Assignments

While this takes time to get used to, in Microsoft Project, the three concepts to understand are work, duration, and units and how they relate to each other. Work = Units x Duration. Changing the value of one will affect the behavior of one of the others.

**Units** represent the percentage of a work resource's time that is assigned to a task. **Duration** is the total working time for a task from start to finish. According to Microsoft Office, **Work** is “the total amount of time scheduled on a task for all assigned resources, the total amount of time to which a resource is scheduled on all assigned tasks, or the total amount of time scheduled for a resource on a task” (1). **Tasks** have types that can be fixed units, fixed work, and fixed duration.

In our project, the duration increased, but work remained the same because our tasks have **Fixed Units.** By reducingthe amount of resource’s time in those fixed units, we increased the duration of time it would take to complete the tasks. In Microsoft Project, making changes to a fixed unit will always result in Project recalculating the duration of the task. To change the value of work, we could change the duration of the tasks.

# Project Cost

Our total project cost is $36,000. This cost might increase or decrease during the execution of the project depending on changes made to the values of work, units and/or duration. Furthermore, cost could also be affected by changes to the standard rates of work regardless of whether the values of work, duration and units changes or not.

For example, if the value of work per unit **increases**, our project cost would go up. A decrease would reduce the cost. If the value of duration changes but work remains the same, project cost would not necessarily go up but remain the same. Similarly, increasing the value of units but decreasing the value of work, would not change the project cost.

Therefore, the factors that eventually determine a project costs are units (number of available resources) and work (the number of tasks or amount of work needed to complete a project). This can be calculated as: Cost = Units x Unit Rates x Work.

**References**

1. *Microsoft Office*. The Microsoft Corporation. Retrieved from *https://support.office.com/en-us/article/how-project-schedules-tasks-behind-the-scenes-df3431ab-8d8a-4047-afc6-a87b547dbac0?ui=en-US&rs=en-US&ad=US*

