

## Module 10 Check Your Work

Work Unit	Planned Value (\$K)	Planned % Complete	Actual % Complete	Actual Cost (\$K)	Earned Value (\$K)
Design the course	54.72	100	100	59.60	54.72
Develop the course	76.80	100	70	60.00	53.76
Pilot the course	22.00	100	20	2.00	4.40
Cost to date	153.52	100		121.60	112.88

**Question 1** - For each of the work units, find the to-date Earned Value (EV). Also calculate the project's total EV and Actual Cost (AC). How should these results be interpreted?

In the table above, calculate the EV for each Work Unit using the formula:

$$EV = \text{Actual Percent Complete} \times \text{Planned Value}$$

Course Design:	EV = 100% x 54.72 =	54.72
Course Development:	EV = 70% x 76.80 =	53.76
Course Pilot:	EV = 20% x 22.00 =	<u>4.40</u>
Total EV =		112.88

$$\text{Total AC} = 59.60 + 60.00 + 2.00 = 121.60$$

When the AC is greater than the EV, the project is over budget.

**Question 2** - Based on cost variances, which of the training development tasks have cost more than was planned?

The formula for Cost Variance (CV) = EV – AC, measured in (\$K).

Course Design:	CV = 54.72 – 59.60 =	-4.88
Course Development:	CV = 53.76 – 60.00 =	-6.24
Course Pilot:	CV = 4.40 – 2.00 =	2.40

Both the Design and Development work units are over budget, because the CV is negative.

**Question 3** - *What percentage of the course development effort remains to be done? What percentage of the money has been spent?*

$$\text{Percent complete (PC)} = \text{EV} / \text{BAC} = 53.76 / 76.8 = 70\%$$

If 70% of the course development effort is complete, then 30% of the effort remains.

$$\text{Percent Spent (PS)} = \text{AC} / \text{BAC} = 60 / 76.8 = 78\%$$

This means that development is behind; more money has been spent than was planned for the amount of work that has been done.

**Question 4** – *Is the training project behind schedule?*

$$\text{Calculate the Schedule Variance (SV)} = \text{EV} - \text{PV} = 112.8 - 153.52 = -40.72$$

Since the SV is negative, the project is behind schedule. This makes sense because the Development and Pilot work units should have been completed (planned % complete equals 100%) but they are only partially completed (actual % complete is less than 100%).

**Question 5** – *Based upon the answers to these questions, what actions could you take?*

The development work is only 70% complete, and the project is behind schedule. One item to look at might be whether the other Rest Easy Hotel Improvement project teams are on schedule. If not, are they as far behind schedule as you are? If the entire project is behind schedule and the schedule will slip, then you might not need to take any action. Some other options are:

- Replace weak resources with more skilled resources, or add skilled resources.
- Resequence some tasks.
- Take advantage of any efficiencies that were missed earlier.
- Increase overtime.

The project is also over budget by \$8,720. Some options to look at are:

- Replacing slower resources with more productive ones.
- Replacing more expensive resources with less expensive ones. However, this may delay the schedule even further.
- Cutting back on discretionary expenses, such as travel or entertainment.