



Technical Skills Course – Basic Excel Project

After reading this assignment, download the assignment workbook.

Now I will introduce you to the Actuarial Example we will be working through.

“Imagine you work as an Actuary for an electronics company. You have been asked to analyze the company’s data and help make sound business decisions. Specifically, your employer sells warranties on a variety of their products such as phones, microwaves, computers, cameras, etc. If a customer buys a warranty for their purchase and it actually break down in the future, this results in a warranty claim where your company will need to provide reimbursement back to the customer.”

Before watching the video solutions, you may want to watch the “Excel Keyboard Shortcuts” video in the “Bonus” area.

Task #1: VLOOKUP

Go to the tab *Warranty Sales*. Your company has sold many warranties based on a variety of items. The goal is to populate the warranty revenue using the VLOOKUP function based on the 1-Year Warranty Price Table toward the right. For example, a Camera that is a Plus brand has a Warranty Revenue of \$84. Fill in the Warranty Value for each Warranty sold and calculate the Total Revenue for 2012.

Task #2: Warranty Claims Analysis using IF functions

Go to the tab *Warranty Claims 1 YR*. In task 1, you sold warranties, but now some items actually broke down resulting in warranty claims. The goal in this task is to analyze the warranty claims data for the year. We will be using various Excel Functions such as SUMIF and COUNTIF. Answer all six questions in the yellow box.

Task #3: Use Pivot Tables to analyze five years of Warranty Sales

Go to the tab *Warranty Sales 5 YR*. You’ve been working for the company now for five years. You now have five years worth of Warranty Sales data. The goal in this task is to analyze the warranty sales for five years. We will be using one of the most valuable tools in Excel known as the Pivot Table. Use Pivot Tables to fill in each of the gray boxes.

Task #4: Dashboard Design

As an Actuary, it is very important to be a good communicator. You are likely gifted at mathematics, but you need to be able to communicate your results to non-technical people. Our actuarial work should influence business decisions. Go to the tab *Dashboard*. The goal of this task is for you to create your own excel charts to communicate your results from your previous analysis. I encourage you to go to “[Google](#)” and search for “Dashboards.” Here are the suggested charts to make within your dashboard:

- Total Sales Revenue by Year
- Total Sales Revenue by Year by Brand
- Proportion of Revenue by Year by Brand
- Count of Products Sold by Year by Brand
- Total Sales Revenue by Year by Item
- Proportion of Sales Revenue by Year by Item

Task #5: Forecasting the Warranty product for next year

One of the most exciting parts of being an Actuary is forecasting. Go to the tab *Forecasting*. The goal of this task is to forecast sales, claims, expenses, profit, etc. for 2013. Be sure to watch the GOALSEEK prerequisite video if you have not yet. Actuaries use mathematics, but the ability to check reasonableness is known as “art.” Try your best to answer all the questions in the yellow boxes.