**Problem:** *Gage Catch Deficiency from NWS Quad Cities Web Site*

**Statement:**

Use the gage catch deficiency curves (Figure 4.16 from Handout) to correct the gage measurements (i.e., estimate the "true catch") for the Iowa City station. Find the corrected precipitation for selected days with precipitation in January 2019.

To obtain the weather data for this period, go to the [National Weather Service Quad Cities Climate](http://w2.weather.gov/climate/index.php?wfo=dvn) page, select the **1. Product** Preliminary Monthly Climate Data (CF6), the **2. Location** Iowa City, and **3. Timeframe** as Archved Data for January 2019. The precipitation depth (water equivalent in inches) is shown in column 7 (labeled "wtr" --- the "T" stands for a trace, or less than 0.01 inches, which is negligible), and the average daily wind speed (in mph) is shown in column 10 (labeled "avg"). Typically you can determine whether the precipitation was snow by looking at column 8 (but use the water equivalent in your calculation), but these data are often missing. For the calculations, you may assume that the gage is **unshielded**.

For **rain** event on 7 January, compute the following:

1. List the precipitation (in inches) and average wind speed (in mph)
2. Compute the gage catch deficiency (%)
3. Compute the corrected precipitation (in inches) (accounting for the gage catch deficiency)

For **snow** event on 22 January, compute the following:

1. List the precipitation (in inches) and average wind speed (in mph)
2. Compute the gage catch deficiency (%)
3. Compute the corrected precipitation (in inches) (accounting for the gage catch deficiency)

**Solution:**



