## Probability Density Functions and Cumulative Distribution Functions Quick Reference Guide

A **Probability Density Function (PDF)** graph shows the frequency of the various values in a data set. In this example, the most frequently-observed high temperature (the mode) in Los Angeles in September is 73°F, which also has about a 10% probability of occurring on any randomly-selected September day.



A **Cumulative Distribution Function (CDF)** graph can be used to determine the percentage of the data set above or below a given value. In this example, there is a 90% chance any randomly-selected September high temperature in Los Angeles will be at or below 83°F, and a 10% chance it will be above this value.

Forecasting Guide: <u>sites.google.com/noaa.gov/nws-fdtd/guide</u> NOAA/NWS Forecast Decision Training Division, Boulder, CO

