(1) Make a table with rows labeled by states and columns labeled by years, showing how many math teachers (by subject) were produced in each state in each year (from 2010-11 (AllStates2012.xls) to 2016-17 (AllStates2018.xls).

(2) Make a program that will produce a similar table for any chosen subject.

1.a) Find the ten largest producers of mathematics teachers (by subject) in the nation in each year from 2010-2011 to 2016-17. (Do the same for other subjects.)
(1.b) Find the ten largest net (total) producers of mathematics teachers (by subject) in the nation in the period 2010-17. (Do the same for other subjects.)
(1.c) Determine how production rates of these providers have been changing from 2010-2011 to 2016-17. (How would you most reasonably estimate and represent a growth trend?)
(1.d) Find the fastest growing producers of mathematics teachers. (What does fastest-growing mean. For example, a program that produces 1 one year and then 3 the next grows by 200%. But with such low numbers, the change is not significant. So what qualifies as a noteworthy change? Noteworthy growth?

(2.a) Take a look at any any large program in one state in one year. Is the
number of completers whose subject (PreparedBySubject sheet) is "Teacher Education - Mathematics"
equal to
the total of number of completers in an area (PreparedByArea sheet) that includes the string "math"?
(2.b) Same question for numerous providers
(2.c) Same question for one whole state.
(2.d) Same question for one each state.

(3.a) Create a visual that shows production trends in one specific subject in one specific state. (Step 1: extract the data. Step 2:

Select (or design) the graphic. Step 3. Put the data into the graphic.)
(3.b) Create a visual that shows production trends in one specific subject in the whole nation.
(3.c) Create a visual that compares production trends in one specific subject in one state with the trend in the whole nation.

(4) Write an interactive program that enables you to select a state and display the graphic in (3.c).