ACHIEVEMENT FIRST

DATA ANALYST TECHNICAL EXERCISE

CONTEXT

As part of AF's mission to close the achievement gap for our scholars, we enroll students from neighborhoods that traditionally have low student achievement. As a consequence, it is not surprising that students will enter the 5th grade significantly below grade level. We are committed to helping all students read at grade level by the end of 8th grade.

The Fountas and Pinnell benchmark assessment system and leveled literacy intervention system (http://www.heinemann.com/fountasandpinnell/) is used in AF schools from grades K-8 to measure student progress in achieving reading mastery. The assessment is administered individually to each scholar by a teacher. The scholar reads increasingly more challenging levels of text while the teacher checks for mastery. Once the scholar reaches the limit of what he or she can read and comprehend, the scholar is assigned an F&P score that corresponds with the level of reading mastery that he or she demonstrated.

The teacher uses the scholar's F&P score to assign the scholar to one of four F&P reading proficiency levels: remedial, below proficient, proficient, or advanced. The conversion of the F&P score into proficiency levels is based on the scholar's reading level, grade level and the phase of the school year.

GOAL

Assuming the role of a Data Analyst for AF, analyze the provided data set (F&P Sample Data Set.xlsx) and prepare a set of findings as you would present them to the AF leadership team and school principals.

NOTES ON THE DATA SET

The dataset contains the F&P assessment results of numerous scholars from two AF middle schools. Each row in the dataset represents a single student and contains the student's beginning of year (BOY) and end of year (EOY) F&P reading scores.

Note that this dataset contains source data with limited data validation. As a result, some modest data cleanup may be required.

It will be necessary to use the information contained within the "F&P Proficiency levels" tab to convert raw F&P scores into their respective proficiency levels.

Please consider at least the following questions in your analysis:

1. How are the two middle schools doing in reading?
2. How does performance compare across the two schools and grades? Are the schools on track to closing the achievement gap?
3. Do you have any concerns or other notes with your analysis?

As the primary metric for performance, you should consider the percent of students that are proficient or advanced.

Please include the following deliverables with your technical exercise submission:

1. Any charts, graphs, or other materials that you would present to the AF leadership team and school principals to inform their decision making
2. Your data file showing your calculations and data modifications
3. Any notes relating to the preparation or analysis of data, and to the development of your findings

The deliverables are due within **one calendar week** from when you received the technical exercise, and should be sent to Rebecca Chintawongvanich at rebeccachintawongvanich@achievementfirst.org. Because we will use this exercise for multiple candidates, we greatly appreciate if you do **not** post your deliverables / findings publicly accessible online.

We recognize that this is a complicated task, which is made somewhat more difficult because you may not have the full context of the source data and F&P testing. Hence, you should feel free to state any simplifying assumptions you need to make as you go through this exercise.