Student Grades

Data Summary:
Columns: Student, Midterm, Final Exam

Data Descrption:
I created this dataset myself for the purposes of this assignment.
This data set contains information about the midterm and the final exam
grades for 10 students.
The midterm grades range from 63-86, and the final exam grades range
from 49-90.
The first column shows the student's names, the second column shows the
midterm exam grades, and the third column shows the final exam grades.
Each row shows the performances for a specific student.

Goals:
Goal 1: Compare the Midterm and Final exam scores for each student individually
Goal 2: Identify student's who perform consistently across both tests
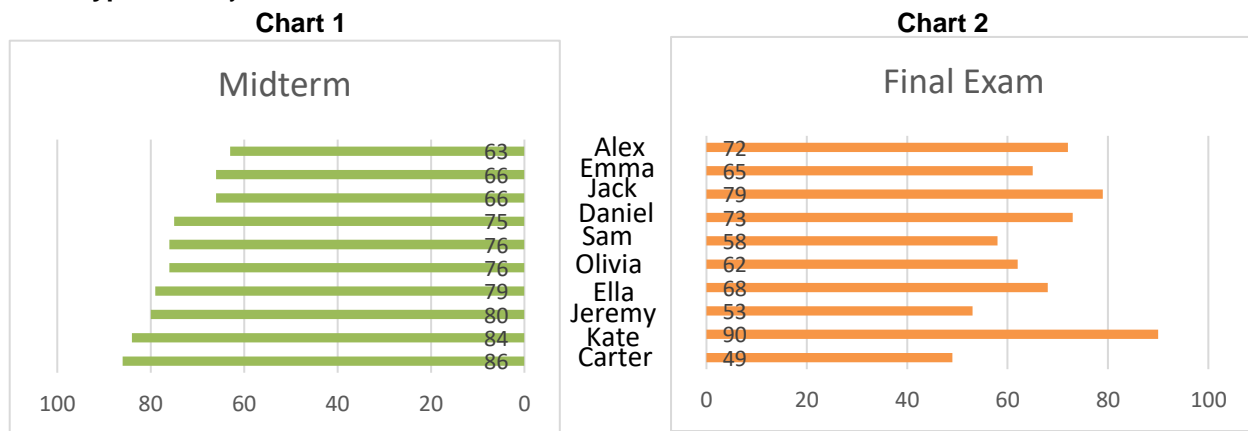**Goal 3:** Analyze the overall performance of the student's
Goal 4: Identify the high achieving student's
Goal 5: Determine whether student's were more likely to see in increase in exam grade
from the Midterm to the Final.

Worksheet 1:

Goal 1: Compare the Midterm and Final exam scores for each student individually
Chart Type: Side-by-Side Bar Chart

Chart 1	Chart 2

Midterm

Final Exam

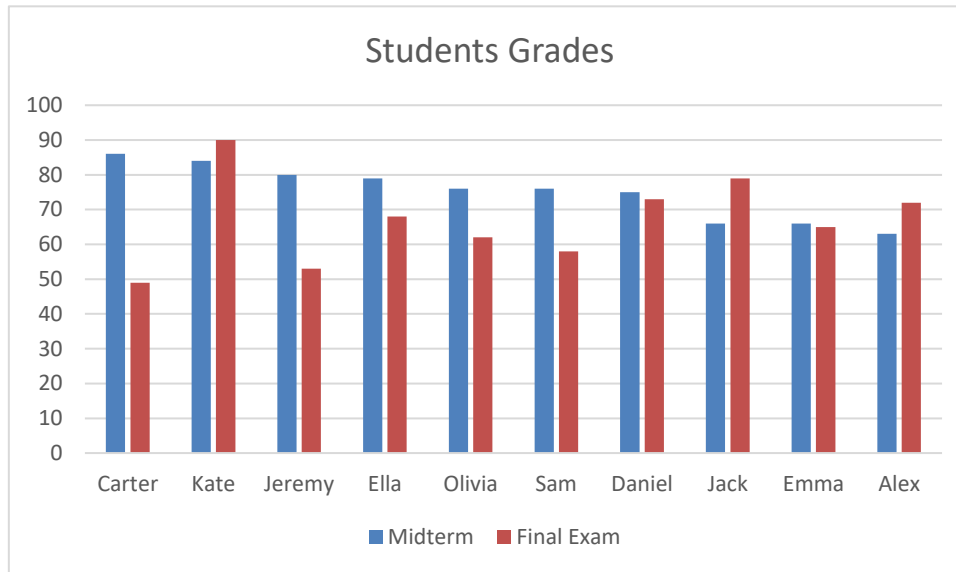|	Midterm		Final Exam
Alex	63		72
Emma	66		65
Jack	66		79
Daniel	75		73
Sam	76		58
Olivia	76		62
Ella	79		68
Jeremy	80		53
Kate	84		90
Carter	86		49

Story

From this graph we can see that for the most part, the midterm and the final exam results are widely different. 7 out of the 10 students saw a decrease in their test results as opposed to the 3 that saw an increase. For the most part, the changes between the midterm and final exam results are very wide. This is seen most prevalently with Carter's midterm and final exam results as he went from an 86 on the midterm to a 49 on the final.
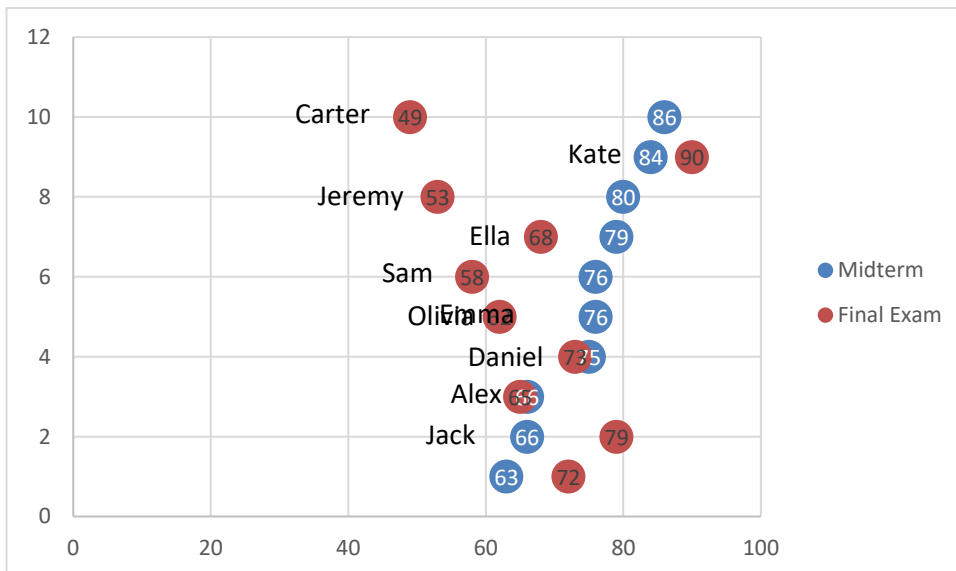
Worksheet 2:

Goal 2: Identify student's who perform consistently across both tests
Chart Type: Dot Plot and Side by Side Bar Plot

Chart 1

Students Grades
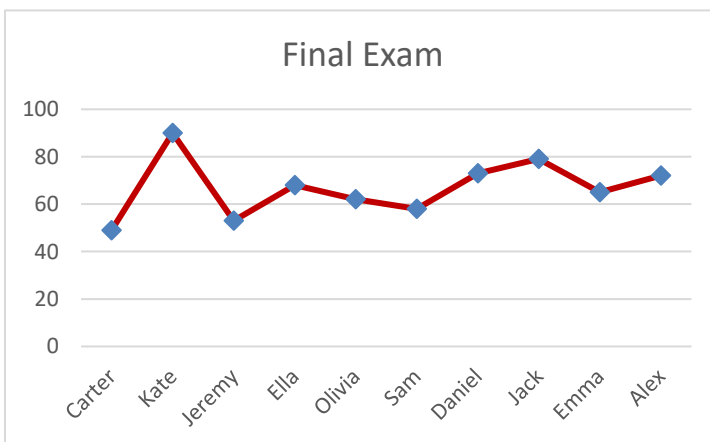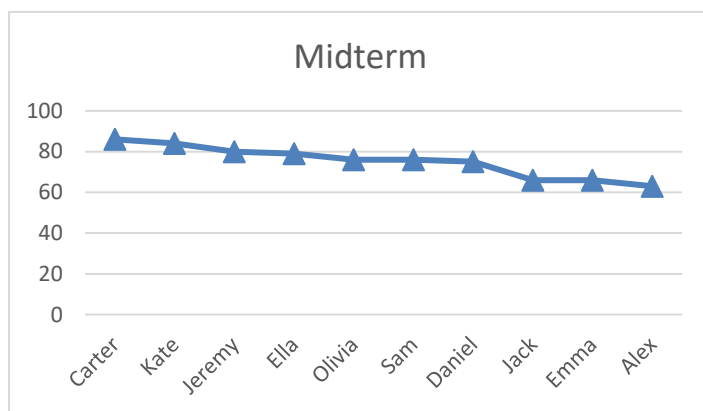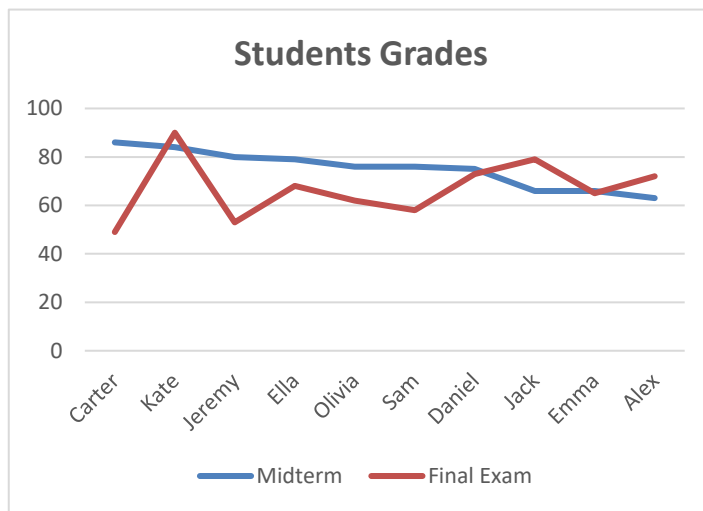

Midterm   Final Exam

Chart 2

Story:
Side and Side Box plot does a very good job in showing which students performed consistently across both tests, because it shows their midterm and final exam bar plots side by side. The Dot Plot is also very good at this because it shows the gap between the midterm and final exam results. Based on these charts we can see that
the students who performed most consistently were Daniel, Kate and Emma.

Worksheet 3:

Goal 3: Analyze the overall performance of the student's
Chart Type: Small Multiples Chart

Students Grades — line chart comparing Midterm and Final Exam grades for students: Carter, Kate, Jeremy, Ella, Olivia, Sam, Daniel, Jack, Emma, Alex

Midterm — line chart

Final Exam — line chart

Story:
The Small Multiples chart helps to show the overall difference in the midterm vs final exam grades.
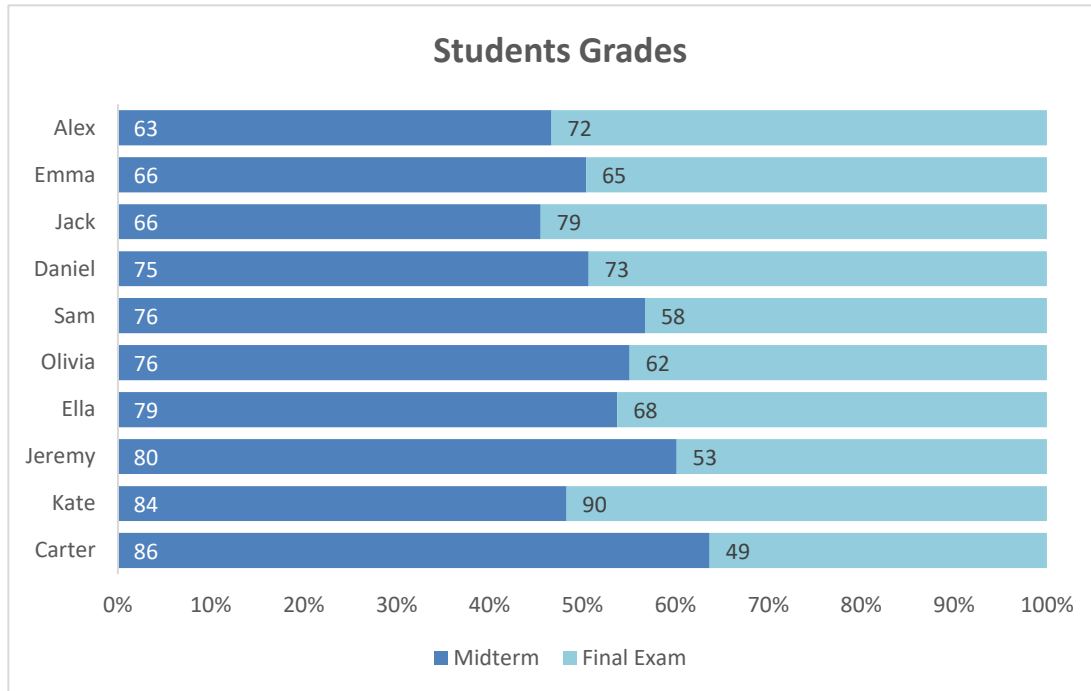 Based on this chart we can see that for the most part the students all performed similarly in the
Midterm exam, but for the final exam there was a lot more variance. There was an overall drop in the
final exam grades with most students performing worst on their final exam in comparison to their midterm.

Worksheet 4:

Goal 4: Identify the high achieving student's
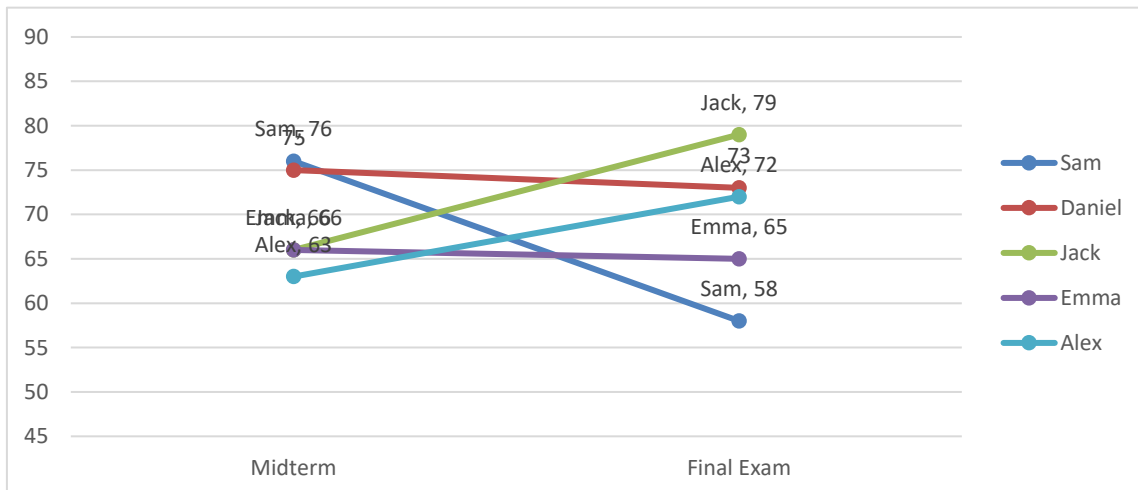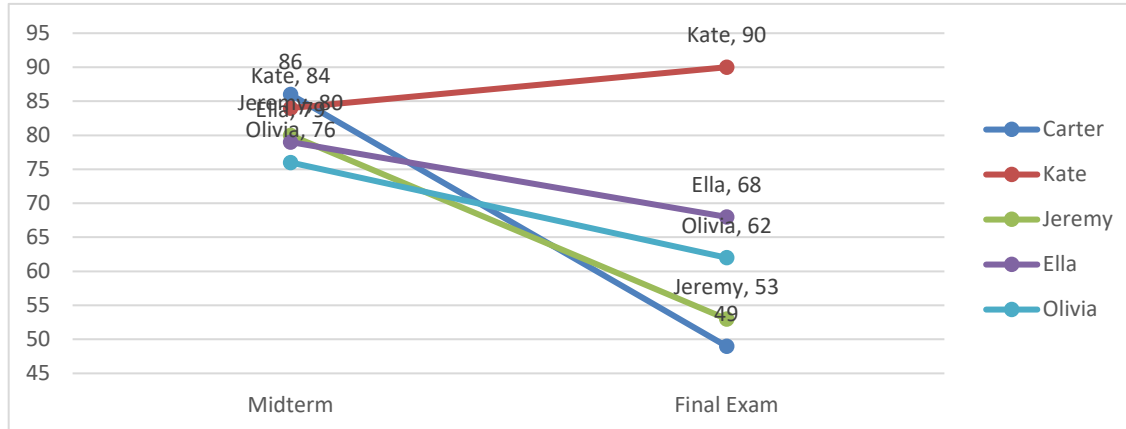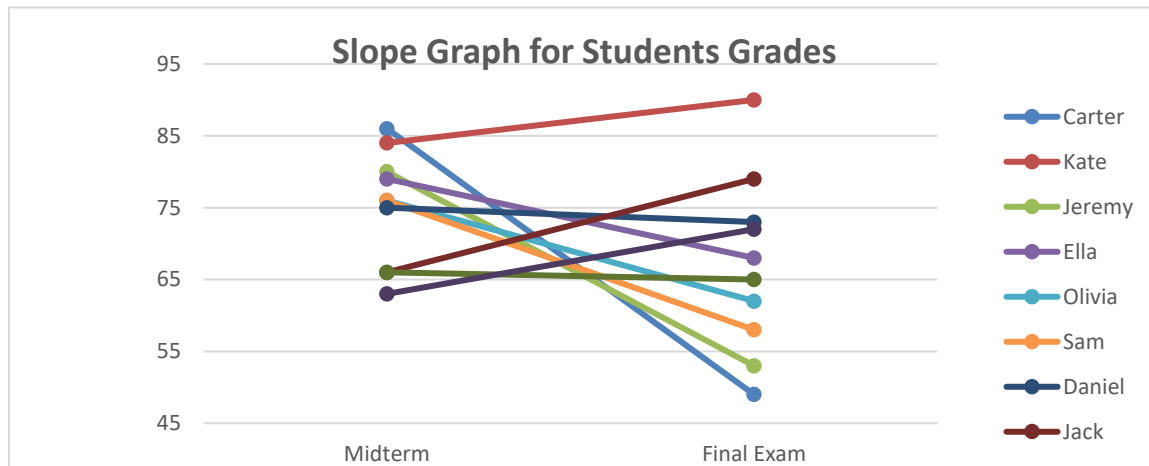**Chart Type:** Bar Chart

Chart:

Story:
This Bar chart does a good job in showing who the high achieving students are,
because the length of the bar plot is associated with the student's grade on the exam.
Based on this chart, we can see that the students that did the best on the midterm were
Jeremy, Kate, and Carter, while the student's who did the best on the Final
were Kate, Jack, and Daniel.

Worksheet 5

Goal 5: Determine whether student's were more likely to see in increase in exam grade from the Midterm to the Final.

Chart Type: Slope Chart

Slope Graph for Students Grades

Story:

Based on these slope charts, we can see that most students had a negative slope when going from their midterm to their final exam results. This means that students were more likely to see a decrease in their final exam results in comparison to their midterm exam results. The exceptions to this are Kate, Jack, and Alex.

Student Grades

Student	Midterm	Final Exam	Dot Spacing
Carter	86	49	10
Kate	84	90	9
Jeremy	80	53	8
Ella	79	68	7
Olivia	76	62	5
Sam	76	58	6
Daniel	75	73	4
Jack	66	79	2
Emma	66	65	3
Alex	63	72	1

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