Mr. Brett Holt plans to open a small boating marina in the east coast. You have been hired by Mr. Holt to apply your Excel skills to help him make better business decisions.

Q0. Download the workbook (JetSkiBusiness.xlsx) from Canvas. Rename it exactly as your last name followed by your G number without "G" and then followed by suffix _assignment_2. There should not be extra spaces or underlines in between. For example, the file's name should be like Greenwood123456_assignment_2.xlsx. You will work on Q1-Q5 on this Excel file and then submit it via Canvas. (1 pts)

Q1. (Loan Analysis) Mr. Holt has secured a 7-year small business loan of $100,000 with 7.75% interest rate and 10% down payment to buy jet skis for his boating marina business. In the Q1 worksheet, calculate the monthly payment amount, total monthly payment amount over the life of the loan, and total interest payment amount. (8 pts)

Q2. (Goal Seek) Create a copy of the Q1 worksheet and name it as Q2. In this worksheet, use Goal Seek to find the interest rate Mr. Holt should be seeking for if he wants to pay only $1300 per month for the loan. Answer obtained not using Goal Seek will get a grade of 0. (8 pts)

Q3. (Scenario Manager) After seeking alternative funding sources and discussing with a variety of banks, Mr. Holt has also received three other options for the $100,000 small business loan from Bank of America, Capital One Bank, and EagleBank as shown below (continued next page).

		Scenarios	
	Bank of America	**Capital One Bank**	**EagleBank**
Loan Term (years)	3	5	10
Interest Rate	5.85%	6.75%	8.25%

Create a copy of the Q1 worksheet and name it as Q3. In this worksheet, use Scenario Manager to create a scenario summary report named **Q3_Scenario Summary** that **ONLY displays the monthly payment and total interest payment** for each possible alternative. Any additional result cell that is not required will get point deduction. The labels for Changing Cells and Results Cells in the scenario summary should be informative. You need to keep both the Q3 worksheet and the resulting scenario summary worksheet. A scenario summary that is not created by Scenario Manager or without the Q3 worksheet will get a grade of 0. (15 pts)

Q4. (Solver) With the secured loan, Mr. Holt has $100,000 budget to buy jet skis. He is evaluating one-person, two-person, and four-person jet skis. Each one-person jet ski costs $8,500; each two-person jet ski costs $10,000; and each four-person jet ski costs $13,800.

The rental season lasts for 90 days. Because many people come for boating in the rental season, every jet ski is rented for every day. Each one-person jet ski is rented for $150 per day; each two-person jet ski is rented for $200 per day; and each four-person jet ski is rented for $350 per day. During the rental season, each one-person jet ski requires a total of 10 hours of maintenance; each two-person jet ski requires a total of 15 hours of maintenance; and each four-person jet ski requires a total of 20 hours of maintenance. The maintenance cost per hour of a jet ski is $100.

Because it is easiest to get customers for one-person jet skis while it is most difficult to get customers for four-person jet skis, Mr. Holt wants to buy at least 4 one-person jet skis, and he does not want to buy more than 5 four-person jet skis. In the **Q4** worksheet, use **Solver** to find out how many one-person, two-person, and four-person jet skis Mr. Holt should buy to maximize his grand total profit from the jet ski rental business. Answers generated not using **Solver** will only get a few partial credits for correct formulas. (18 pts)

Hint:

Total maintenance cost = Maintenance hours needed * Hourly maintenance cost * Purchase quantity

Total revenue from rental=Rental price per day * Rental season in days * Purchase quantity

Q5. (Optional bonus question: not required) In Q4, Mr. Holt has asked for your recommendation on how many jet skis to purchase to maximize the profit of his business. Meanwhile he already has three possible decisions in mind based on his business intuition, as shown below.

	Scenarios		
	Decision 1	**Decision 2**	**Decision 3**
One-person jet ski	5	5	4
Two-person jet ski	1	2	4
Four-person jet ski	3	2	3

Now you need to convince Mr. Holt why your recommendation in Q4 is the best decision. Create a copy of the **Q4** worksheet and rename it as **Q5**. In this worksheet, use Scenario Manager to generate a scenario summary named **Q5_Scenario**

Summary that compares the three alternatives Mr. Holt has in mind with your recommendation in Q4 (you need to figure out what the result cells should be in this scenario summary so that you can use the proper numbers to convince Mr. Holt). For each alternative Mr. Holt has in mind, you need to **clearly explain in texts** why it is a worse business decision compared to your recommendation in Q4. (2 optional pts if correctly done)