1. Question 1

The following file describes the situation faced by a landscaping company, 'Landscaping Solutions'.

C3 W5 Final Assessment.xlsx

If there is great weather, the company takes the following hours to complete a driveway, backyard, front yard, back verandah, and front porch: 20, 30, 25, 25, and 20 hours respectively.
Good weather increases all times by a factor of 1.1.
Bad weather increases all times by a factor of 1.25.
Stormy weather increases all times by a factor of 1.5.
A natural disaster increases all times by a factor of 2.0
Great weather, good weather, bad weather, stormy weather, and a natural disaster have the following probabilities of occurrence: 0.6, 0.25, 0.1, 0.04, and 0.01 respectively
All these probabilities (weightings) sum to 1.
Use SUMPRODUCT to calculate the estimated hours of work to complete the landscaping.
Please answer using the format ###.##.

1. 129.6

2. Question 2

The labourers hourly wage is $30 an hour. In B15, calculate the estimated wage cost, without bonuses, given the estimated hours of work. What is the estimated wage cost? Do not include a currency symbol.
2. 3888

3. Question 3

In A15:B22, create a Data Table that calculates the estimated wage cost for wage rates from $24 an hour to $36 an hour in increments of $2 an hour.
What is the sum of all the estimated wages in your data table (B16:B22)? Do not include a currency symbol.
3. 27216

4. Question 4

In A26, calculate the estimated wage cost with a bonus rate of 10%. In A26:G34, create a Data Table that calculates the estimated wage cost for wage rates from $24 an hour to $38 an hour in increments of $2 an hour, including bonuses for the workers ranging from 5% to 10% in increments of 1%.
What is the sum of all the estimated wages in your data table (B27:G34)? Do not include a currency symbol.
4. 207308.16

5. Question 5

It has been estimated the company's revenues per week can be estimated by the equation revenue = (240 - 30Q)*1000Q where Q is the number of gardens attended to per week. In B39, calculate the total revenue if the quantity is 1. What is the total revenue? Do not include a currency symbol.
5. $210,000.00

6. Question 6

It has been estimated the company's costs per week can be estimated by the equation cost = (120 + 8Q)*1000 where Q is the number of gardens attended to per week. In B40, calculate the total cost if the quantity is 1. What is the total cost? Do not include a currency symbol.
6. $128,000.00

7. Question 7

What is the total profit if the quantity is 1?
7. $82,000.00

8. Question 8

Use Solver to calculate the quantity that maximises the profit per week. Use the format #.##.
8. 3.87

9. Question 9

Use Scenario Manager to save two alternate scenarios for Q = 3 (low quantity) and Q = 4 (high quantity), and display this Scenario Summary.
Which screenshot most closely resembles what you see?
9. Quantity=3, Profit=306,000, Quantity=4, Profit=328,000

10. Question 10

Use Goal Seek to calculate: What is the quantity required to generate a profit of $300,000 per week? Use the format #.##.
10. 2.89