Exercise 11 (Golf)

Elaborate model, data tables, graphs

A golf club offers two formulas to its customers.

- A yearly subscription, which allows you to play a given number of times.
- A green fee that you have to pay each time you want to play a round of golf.

The subscription depends on how many rounds you expect to play in the year. There are five possible subscriptions:

Subscription	# of rounds	Yearly amount	Cost per round
Discovery	1-4 rounds	240,00 €	30,00 €
Leisure	5-9 rounds	300,00 €	20,00 €
Regular	10-19 rounds	400,00 €	12,00 €
Intensive	20-39 rounds	500,00 €	8,00 €
Professional	40 rounds or more	700,00 €	3,00 €

Part I : Subscriptions only

Question 1

You are analysing the situation of a player who intends to play 15 rounds during the year. Calculate his cost, which should correspond to the following table:

# of rounds	15
Subscription	**400,00 €**
Unit Cost	**12,00 €**
Cost of rounds	**180,00 €**
Total cost	**580,00 €**
Average cost per round	**38,67 €**

The yearly subscription chosen depends on the number of rounds the player expects to have in one year

Question 2

Create a table with which you can evaluate the total yearly cost and the average cost per round as a function of the number of rounds played (from 1 to 50), for each type of subscription.

Question 3

Create a graph representing this table, on the same sheet.

Part II : Comparison of subscriptions with additional rounds

Question4

If the member plays more than the maximum # of rounds allowed by his subscription, he has to pay a fee of 25 € per additional round.

For a given subscription (e.g. “Regular”) and for a given number of rounds (e.g. 22), build the following model:

Subscription # of rounds played	Regular 22
Subscription cost	400,00 €
Max # of rounds allowed within the subscription	19
Unit cost of the subscription rounds	12,00 €
Total cost of subscription rounds played	228,00 €
Total subscription cost	628,00 €
# of additional rounds played	3
Cost of additional rounds	75,00 €
Total cost	703,00 €
Average cost per round	31,95 €

Question 5

Build a two-dimensional table depending on the subscription (from Discovery to Professional) and on the number of rounds played (from 1 to 50) and showing the total cost. Illustrate this with a graph on a graph sheet (not a worksheet).

Question 6

Add a column to the preceding table and calculate – for each number of rounds played from 1 to 50 – the name of the cheapest subscription (including possible additional rounds).

Question 7

Show, for each of the five subscription types, the lower and the upper number of rounds for which this subscription is the cheapest.