AQ4.4: Activity Question 4 - Not graded

**This assignment will not be graded and is only for practice.**

**Note : This activity is for your practice purpose only. Your score in this will not count towards the Qualifier Process.**

Assume that we have 20 objects that need to be compared. (Answer the questions 1-4)

How many pairwise comparisons do we need to make if each object is compared with every other object exactly once?

***1 point***

Assume that we can distribute the 20 objects into bins of equal size. If we go with four bins, how many comparisons would we have to make overall?

***1 point***

We distribute the 20 objects into bins of equal size. How many bins should we choose to make the least number of comparisons overall?

***1 point***

Based on questions 1 and 3, by what factor does binning reduce the number of comparisons?

***1 point***

***1 point***

We want to find the number of pairs of students who satisfy both the conditions given below:

* Both students in the pair have the same *total marks*.
* Both students do not belong to the same gender.

We now divide the students into two bins, one which contains boys and the other which contains girls, and perform pairwise comparisons within the bins. Will this approach give us the correct answer for the number of pairs?

Yes

No

***1 point***

We have data about the birth dates (year/month/date) of 100 people in a room. We wish to find the number of pairs of people who were born in the same year. Which of the following is the most ideal binning strategy?

Use 12 bins, one for each month.

Use 2 bins, one for people born before the year 2000 and another for people born on or after the year 2000.

Use 12 bins, one for each decade starting from the year 1900.