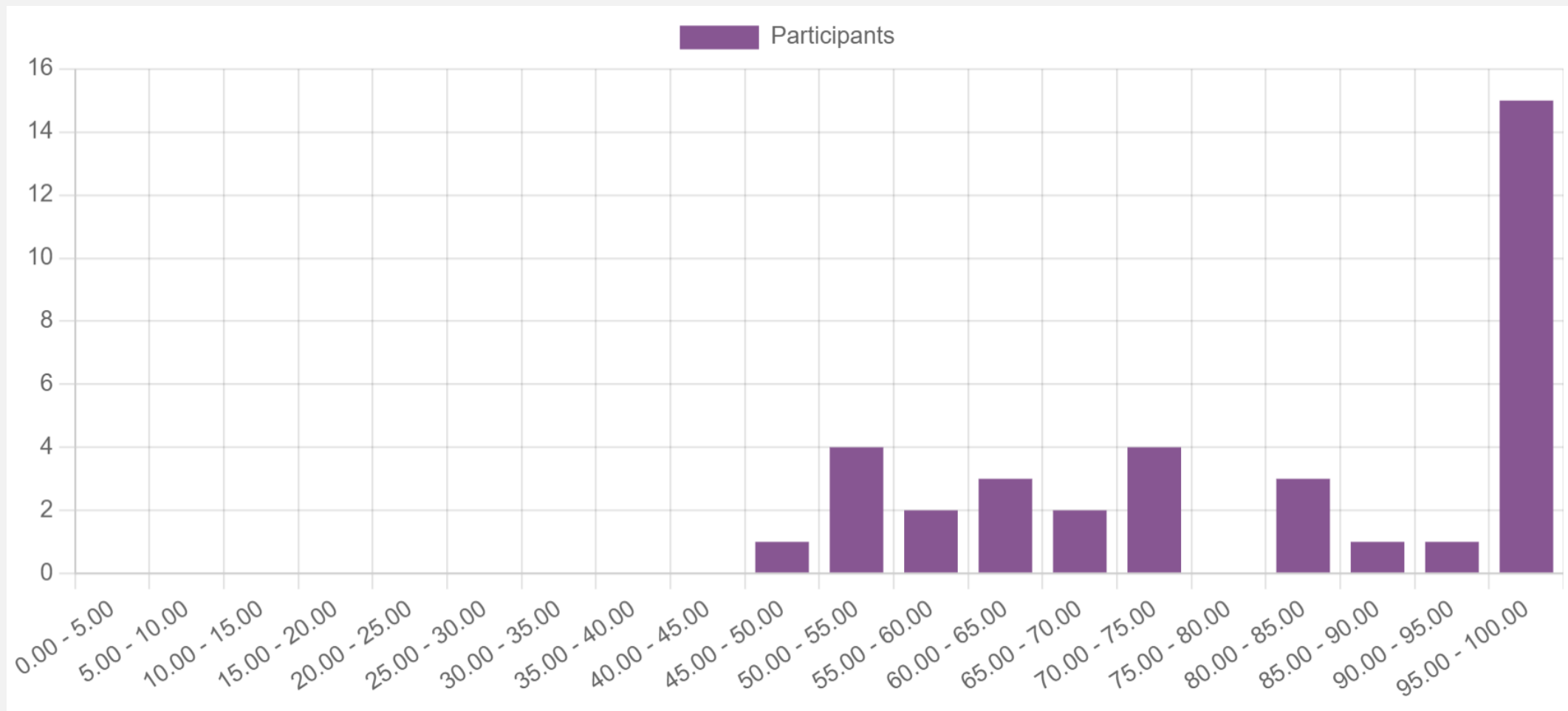CASA0007: Quantitative Methods

Quiz for week 1

Result

Attempts: 83/140 (??)

Which of the following are appropriate references for academic writing? (BCD)

1. Plagiarism. (n.d.). In *Wikipedia*. Retrieved August 10, 2004, from https://en.wikipedia.org/wiki/Plagiarism

2. **Batty, M., 2013. *The new science of cities*. MIT press.**

3. **Dennett, A., & Wilson, A. (2013). A Multilevel Spatial Interaction Modelling Framework for Estimating Interregional Migration in Europe. *Environment and Planning A: Economy and Space*, 45(6), 1491–1507. https://doi.org/10.1068/a45398**

4. **Office for National Statistics. Population estimates for the UK, England and Wales, Scotland and Northern Ireland [Internet]. 2020 [cited 2021 Aug 13].**

Tip: Don't use Wikipedia as references for academic writing

Which of the following are NOT proper research questions? (AD)

1. <u>Understanding of the racial segregation in San Francisco</u> ☑

2. What is the association between house prices and gentrification in London?

3. Is it possible to use machine learning for predicting the Covid-19 death rate based on socio-demographic data?

4. <u>Using statistical models to evaluate the efficiency of Covid-19 vaccinations</u> ☑

Tip: Research questions must be a question, ending with a question mark; they are different from article titles

Which of the following are proper tables in academic writing (AB)

A)

Table 1. Population proportion and IFR initialized by age

Age	Proportion (%)	IFR (%)
0-44	55.7	0
45-64	25.8	0.5
65-74	10.0	3.1
75+	8.5	11.6

B)

Table 1 Behavior space settings

Variable	Value	Variable	Value
"cure-period"	29	"E-to-I-pro-during-7days"	20
"workers-num"	50	"people-move-speed"	5
"people-num"	1500	"worker-move-speed"	4
"die-pro"	15	**"goverment-act-days"**	**[25 25 500]**
"show-workers-place?"	false	"cure-pro"	50
"persons-move-radius"	8	"S-to-E-pro-by-I"	20
"worker-move-radius"	24	"infect-distance"	0.8
"S-to-E-pro-by-E"	10	"show-bigger-shape?"	false

Q3

Which of the following are proper tables in academic writing (AB)

C)

- Table title should be above the table.
- This is a screenshot from Python, which should not be directly used as a table in the essay.
- Only include the key information in a table. Remove the irrelevant items that you are not going to discuss in the essay.

C)

Model:		OLS	Adj. R-squared:			0.026
Method:		Least Squares	F-statistic:			16.89
Date:		Tue, 18 Jan 2022	Prob (F-statistic):			4.52e-05
Time:		04:47:36	Log-Likelihood:			1144.0
No. Observations:		592	AIC:			-2286.
Df Residuals:		591	BIC:			-2282.
Df Model:		1				
Covariance Type:		nonrobust				

	coef	std err	t	P>|t|	[0.025	0.975]
inmate_case_density	0.0086	0.002	4.110	0.000	0.004	0.013

Omnibus:	602.989	Durbin-Watson:	0.050
Prob(Omnibus):	0.000	Jarque-Bera (JB):	28555.907
Skew:	4.624	Prob(JB):	0.00
Kurtosis:	35.743	Cond. No.	1.00

Table 1: OLS Linear Regression Output

Which of the following are proper tables in academic writing (AB)

D)

D)

- Table title should be above the table.
- Tables should not contain colours other than black. Can use bold for highlighting

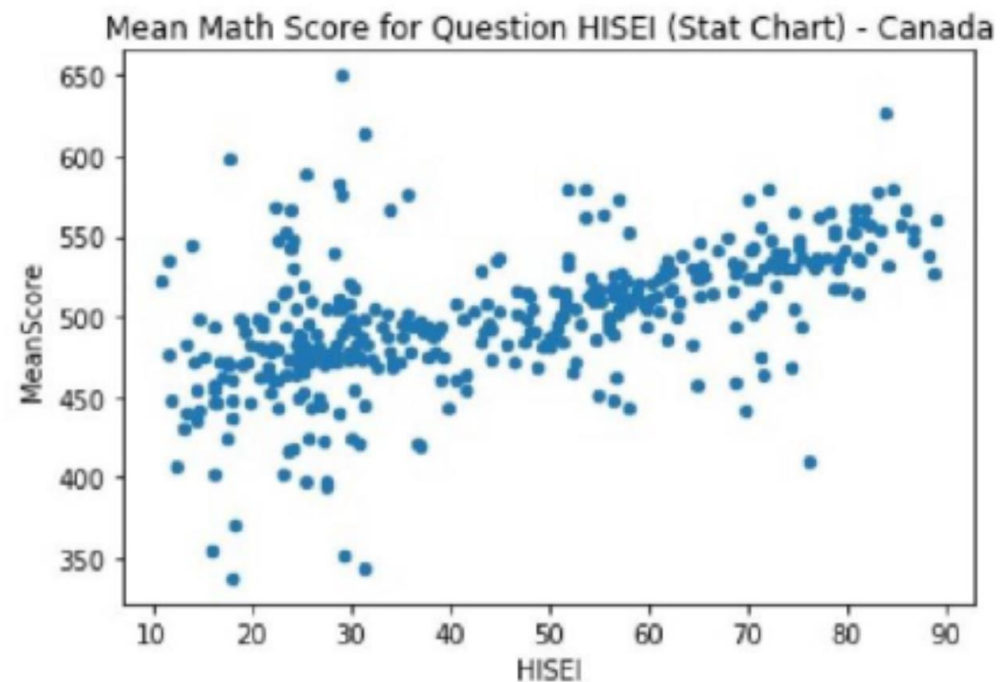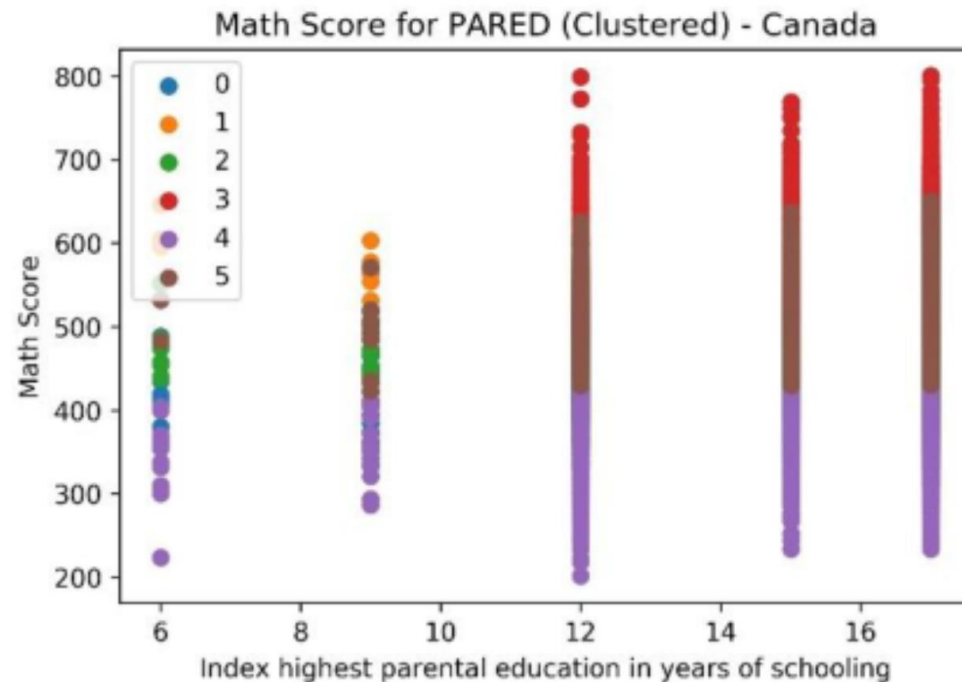| Immediate Growback				
Initial population	Survival rate (%)	Average-vision	Average-metabolism	Average-population
400	61.98	3.76	2.02	247.90
600	61.68	3.75	2.02	370.10
800	60.61	3.75	2.00	484.90
1000	59.93	3.76	1.95	599.30
Average	**61.05**	**3.76**	**2.00**	**425.55**
Constant Growback				
400	57.83	3.85	1.79	231.30
600	47.42	3.73	1.58	284.50
800	43.46	3.62	1.48	347.70
1000	44.53	3.58	1.47	445.30
Average	**48.31**	**3.70**	**1.58**	**327.20**

Table 1. Model results

The figure below is from a report submitted to CASA0007. What are the problems? (ABCD)

Figure 2 (left): Residual plot (clustered) of parents' education years

Figure 3 (right): Proves the positive linear relationship between parents' education and students score

Q4

UCL

The figure below is from a report submitted to CASA0007. What are the problems? (ABCD)

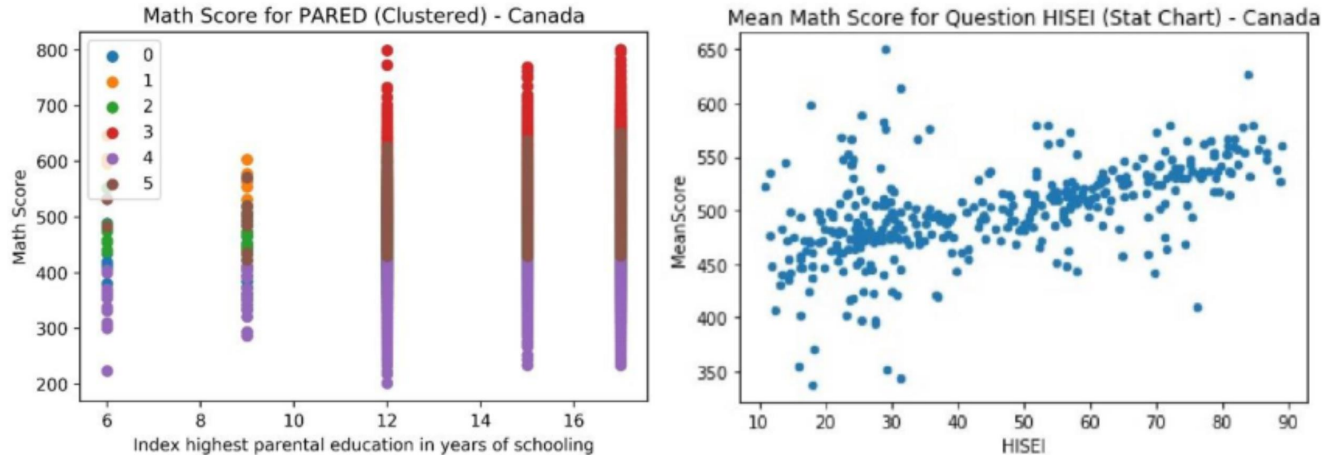**Figure 2** (left): Residual plot (clustered) of parents' education years

Figure 3 (right): Proves the positive linear relationship between parents' education and students score

A. The figure titles should be below the figures
B. Figure 2 and 3 should not be stacked horizontally
C. The legend in the left-hand figure should not overlap with the points
D. There are considerable overlap among the points in the left-hand figure. Should reduce point size or increase the transparency.

Which of the following are considered as academic misconduct? (**ACD**)

A. Hiring a friend to write the essay for me ☑

B. Paraphrase ✗

C. Using two sentences from a paper without quoting or referencing ☑

D. Writing one essay and submitting to both CASA0007 and CASA0013 ☑