

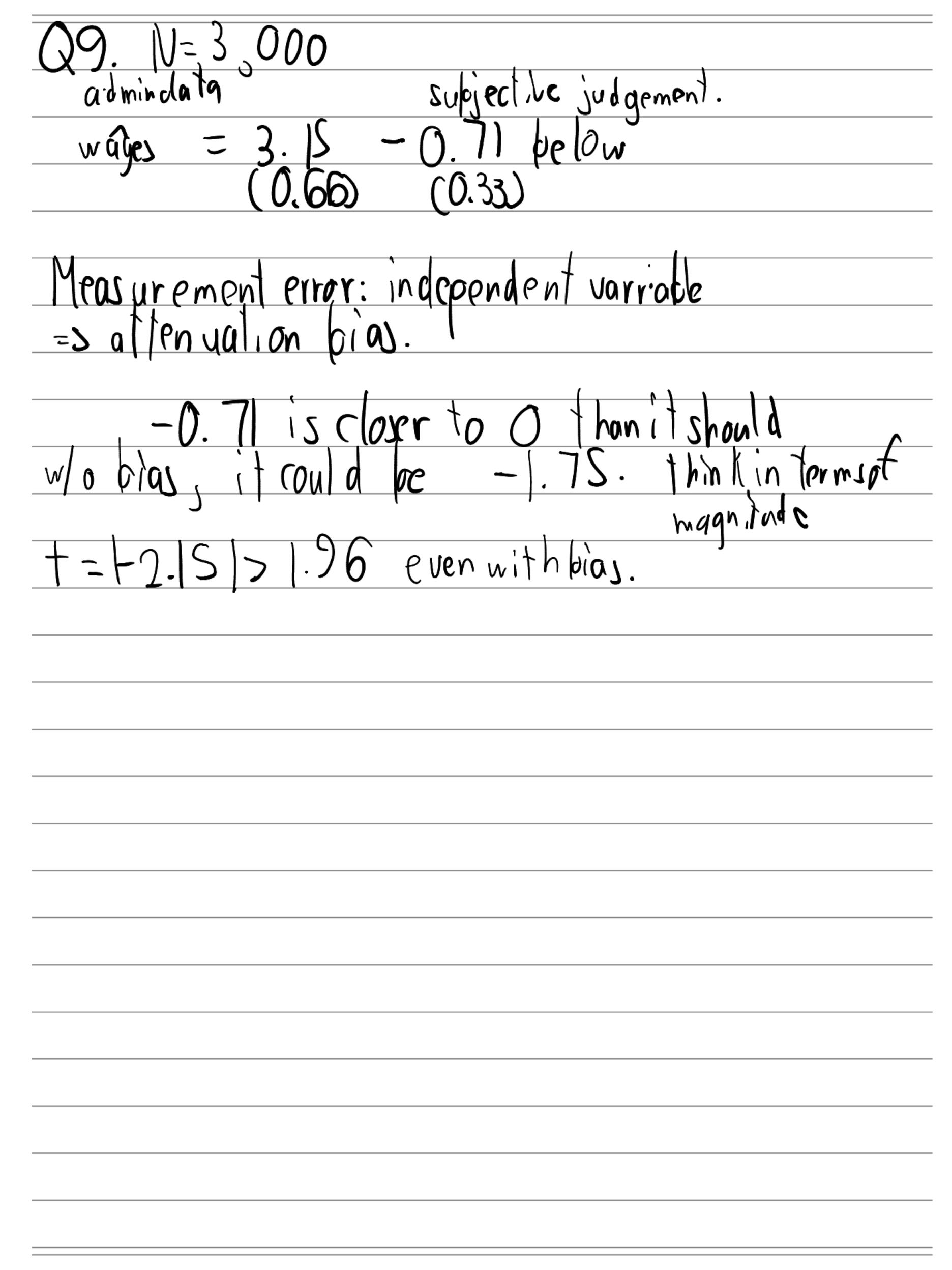
Lastweet
<u>- OVB</u>
- Sample selection - Projection vs. regression - Non-ran dom-sampling - Unbla sedness Reverse causality
- Projection vs. regression
- Non-ran dom-sampling
- Unbla sed noss.
- Keverse Causalty

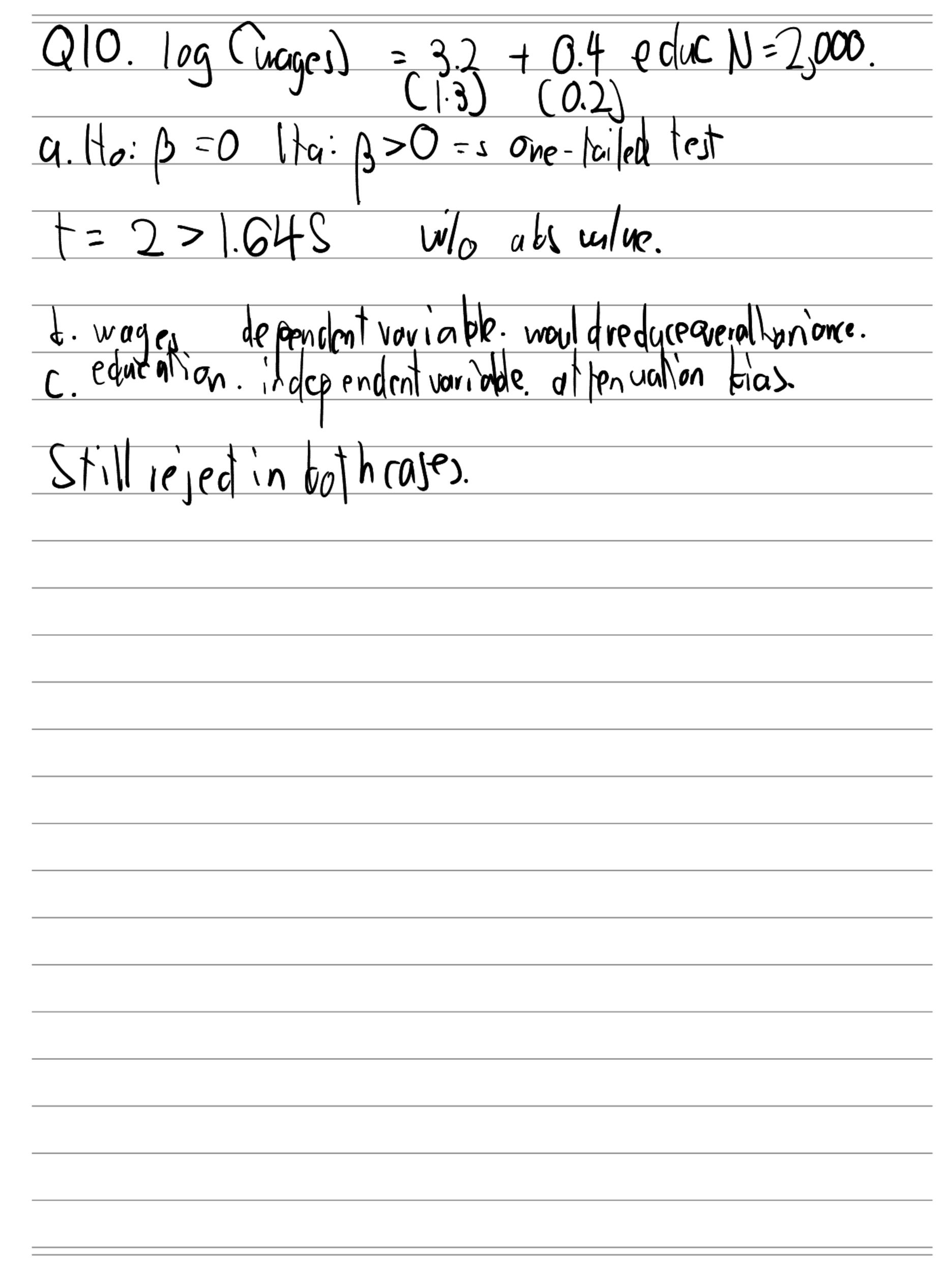
Today
-take attendance - What is in there for me to do the formative? - Recapof theor TG PII AT WII (lass Exercises - Holidays.
- What is in there for me rado inetor malive!
- Ke Capot Infor 16 PH.
- 4 MI (1022 FX61C1762
- Holi days.

L4: Outlying observations.
- Leverage values - Influential observations/Outliers Correction methods: Leave-one out estimator Outlier # typo # different units # measurement error.  Alternative in thods: - Istimate log model Droboutliers Winsorise Model median, 99th percentity etc.
- Correction methods: Leave one out estimator.
Aller native methods:
- Dropoutliers.
- Model median, 99th percentity etc.

LG: Heterostregoulicity.
- Makes in Ference harder. Vor (B) 1562-62)
identically independently distributed non-heteroskedas non-random ticity sampling
ticity sampling Vor(e: N=0:2

. •1 •
S: Measurement error
Dependent y=y+eo eor MOSEO
Independent $x = x^3 + e_1 e_1 \sim V(0, \delta_{e_1})$
y= Bo + B, X+ (P-B, P)
(or (x,e,)= 1F[e,2]=var(e,)
plim (B)=B; Attenuation bias: drives  plim (B)=B; Attenuation bias: drives  magnitude toward  O.



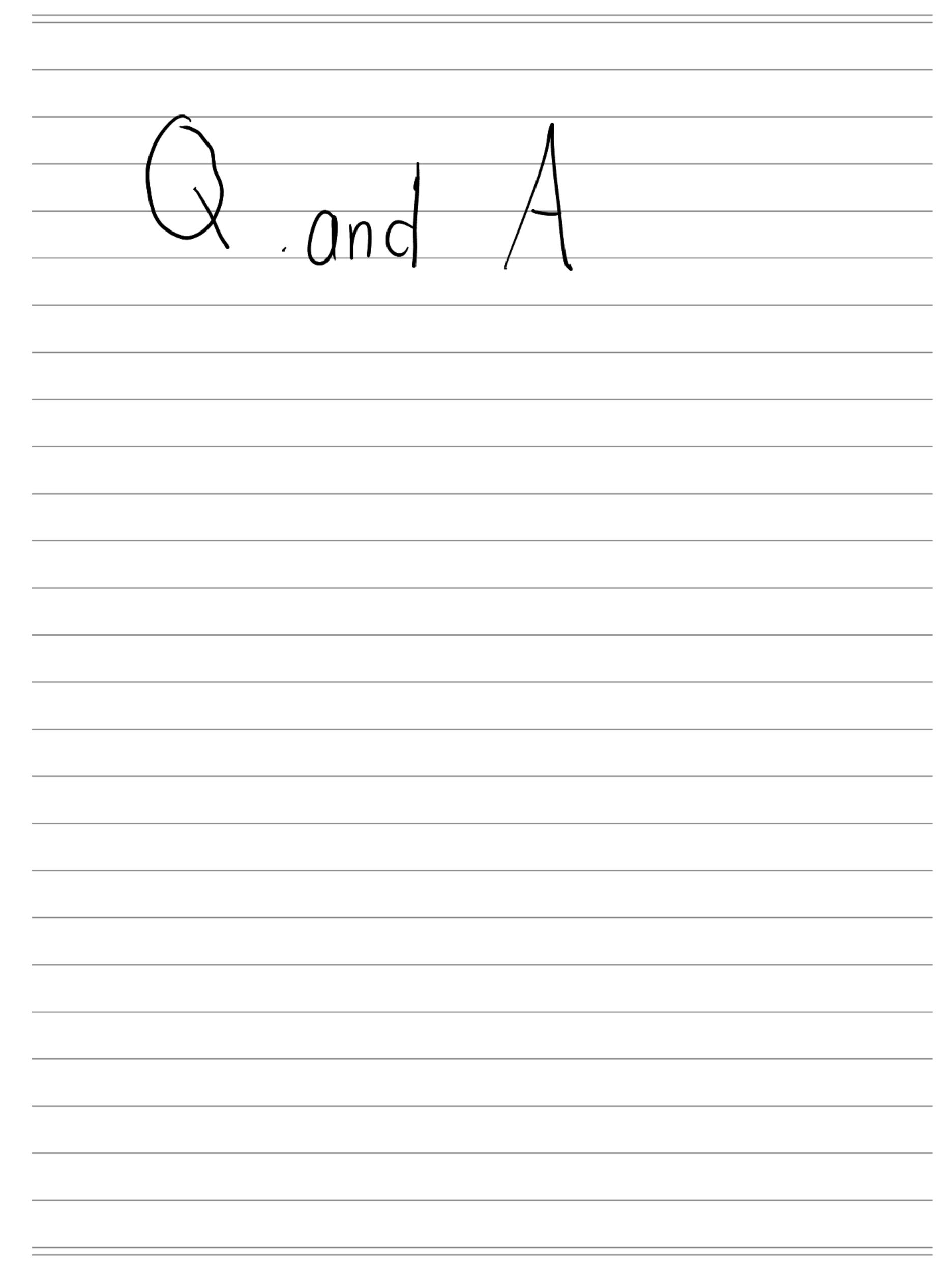


Q11. Some answer as teclure stides.
Feel freeto ost for charification!

QD. Why measurement error in the independent variable is not "a severe problem".
Marlah (1/2 mat ") a cours problem"?
VOITABLE 10 1 A SCALL BIOBENT.
$\frac{1}{\sqrt{2}}$
Attenuation plas: plim 13, 1= B
Attenuation plas: plim (B, )= B, 1+ var(e)
<u> </u>
TOTION OF THE PROPERTY OF THE
Magnitude 1s always lower. Estimate ga es 100.
Lower found.
Does not affect the sign persuasive of the effect. Bod when you need the point estimale.
DUC 3 110 1 CH 1 CH 3 1411 1 1 1 1 4 4 1 1 1 1 1 1 1 1 1 1
13ad When you need I he pointestimal.

QB. profits = Bo+B, log(sales) + P
B: 1 190 of sales will in crease profils  by B millions of dollars.
1 100
Heteras he douticity does not affect point alimats. Only offect infrage.

Q14.	Same argument as slides.



Sym mary
- May Grement error.  - Lower bound  - Attenuation bias  - Non-random Sumpling  - Helpros reductivity  - Outlying observations.
-Lower bound
- Attenuation bias
-Non-random Sanding
- Heleros Kedastility
- Out lying obgernations.
Seeyou on January.