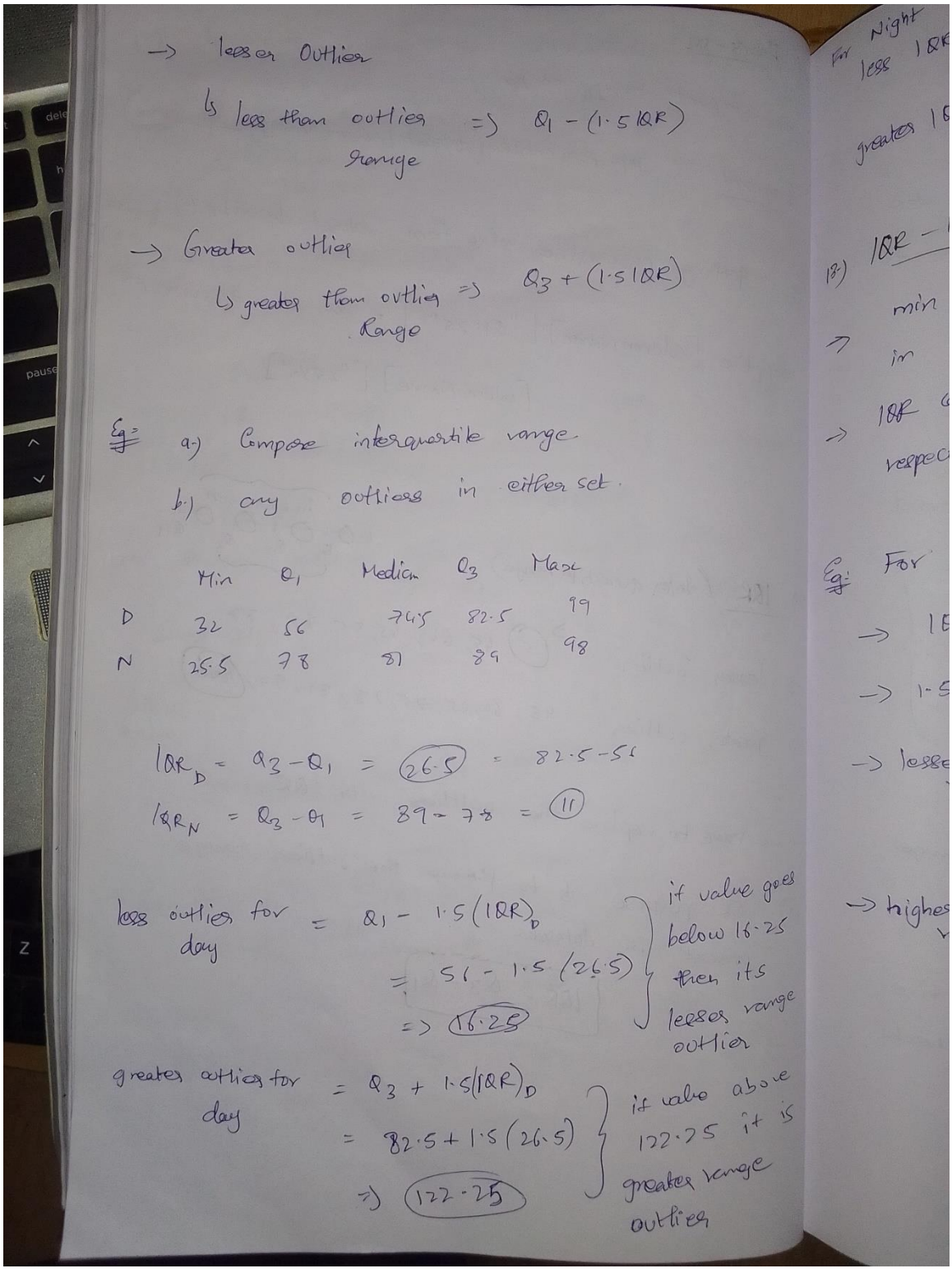
IQR CALCULATION



→ lesser Outlier

↳ less than outlier range => $Q_1 - (1.5\,IQR)$

→ Greater outlier

↳ greater than outlier Range => $Q_3 + (1.5\,IQR)$

Eg: a.) Compare interquartile range

b.) any outliers in either set.

	Min	Q_1	Median	Q_3	Max
D	32	56	74.5	82.5	99
N	25.5	78	81	89	98

$IQR_D = Q_3 - Q_1 = 26.5 = 82.5 - 56$

$IQR_N = Q_3 - Q_1 = 89 - 78 = 11$

less outliers for day $= Q_1 - 1.5(IQR)_D$

$= 56 - 1.5(26.5)$

$\Rightarrow 16.25$

} if value goes below 16.25 then its lesser range outlier

greater outliers for day $= Q_3 + 1.5(IQR)_D$

$= 82.5 + 1.5(26.5)$

$\Rightarrow 122.25$

} if value above 122.25 it is greater range outliers

For Night

lesser IQR = 78 − 1.5(11) = 61.5

greater IQR = 89 + 1.5(11) = 105.5

13.) IQR – Hands ON: (coding executes line by line)

→ min and max range is always found for colums in original dataset.

→ IQR calculation is done for each column using their respective Q_1 and Q_3.

Eg: For degree-P column

→ IQR = $Q_3 - Q_1$ = 72 − 61 = 11

→ 1.5 Rule = 1.5 × IQR = 1.5 × 11 = 16.5

→ lesser range = 61 − 16.5 = 44.5 (lesser value than 44.5 is considered lesser range outlier)

→ higher range = 72 + 16.5 = 88.5 (greater value than 88.5 is considered greater range outlier).