Pra Steps 1) Data of <u>m</u>'observations 2) No. of fearters = b' (3) Form a martin of size mx b' with deviators from mean for each of the variables Galculate (orasionale neation (pxp) (0v(7,4) } (Ni-7) (9;-7)

3) Calculate eggen values of eigenvectors y tree (ovaluence reating

6) Choose principal components how fearther with

7 Desure the new date ret

Trace (s): The fraction of the

total vouvonce accounted for

by the jth trincipal composent

as:

Trace (s)

PCA

Whore Trace (s) = ET j

Trace (s) = 322.4 + 27.7

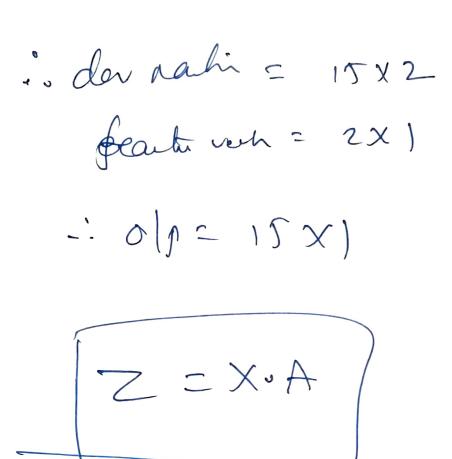
= 350.1

Total vamont accounted of 11t Swneyal comporant as:

- 3223 = 300.1 - race(s) = 350.1

i.e. 920/0 y fotal reptem vanvante et refuted by 1st Ad R

the reconcurry 8 % as refuted by 2nd compotent. Hence PCZ is replected 4 anly Pd I is Convolued. From the 2 eigen vectors the selected: 0.801 (aut Meh' reichtly run der. tu aleve relected feautur Der. vec 7 = 15 nows u 2 = 15 ms.



Multiply the Martin of deviations from Mean with the eigen vechos to form a reduced vector.

This will be the reduced Seautine ret

v have & indehnlut -) U formulate "f" principal
Composent y=f(x1, x2 ---, xb) 2) we set & francifed aufo ent Each P Composits to Variance un Choose of y by principal aufoient (0xb) to be included in