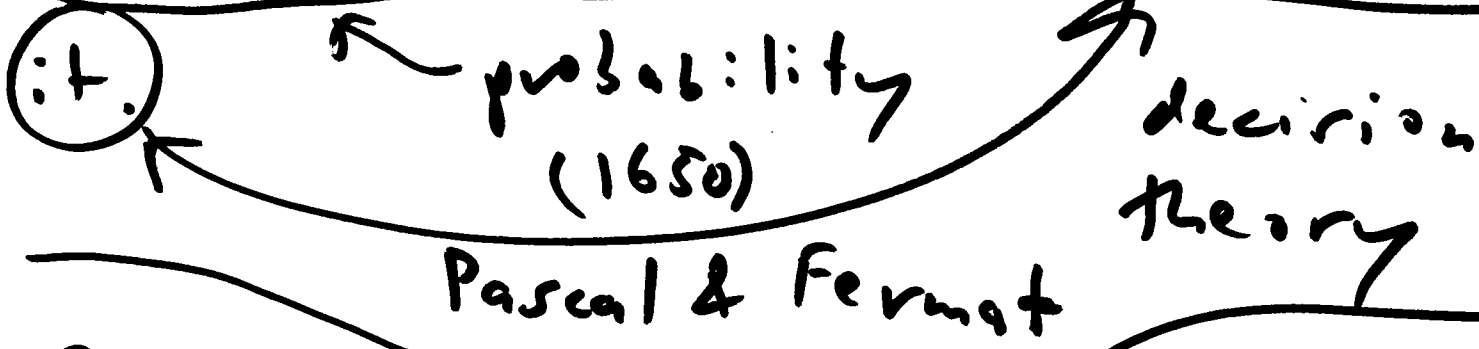


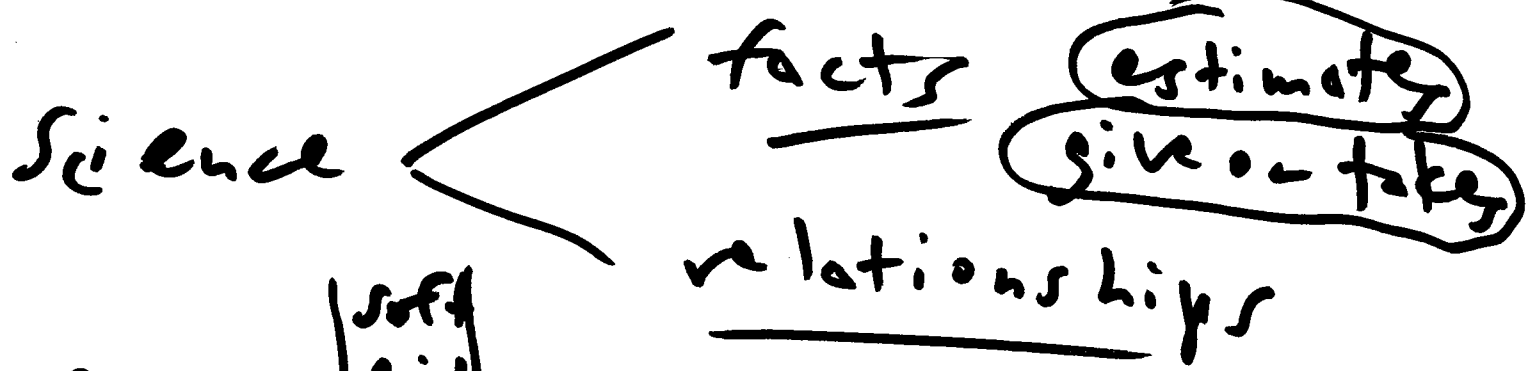
Statistics: study of uncertainty: <sup>(AMS 5) (31 Mar) ①</sup>

how to measure it, what to do about

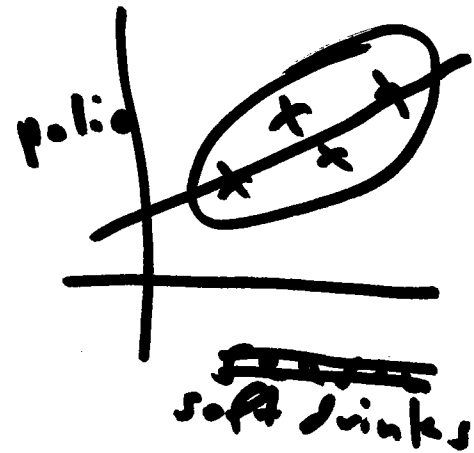


Science: knowledge for its own sake

Decision-making: using knowledge to make a choice



season	soft drinks	polio incidence
w	low	Low
sp	higher	higher
su	higher	higher
F	lower	lower



decision-making: prediction <sup>②</sup>

decrease uncertainty: data gathering

experimental  
design  
(NEJM)

sample  
survey  
(Gallup)

descriptive  
methods:

numerical  
graphical  
(time  
series  
plot)

test score

- 61
- 48
- 58
- :
- :
- 92
- 49

subjects

the people or things under study

(n = 223)

sample size

Sort

variables

(raw frequency) relative freq.

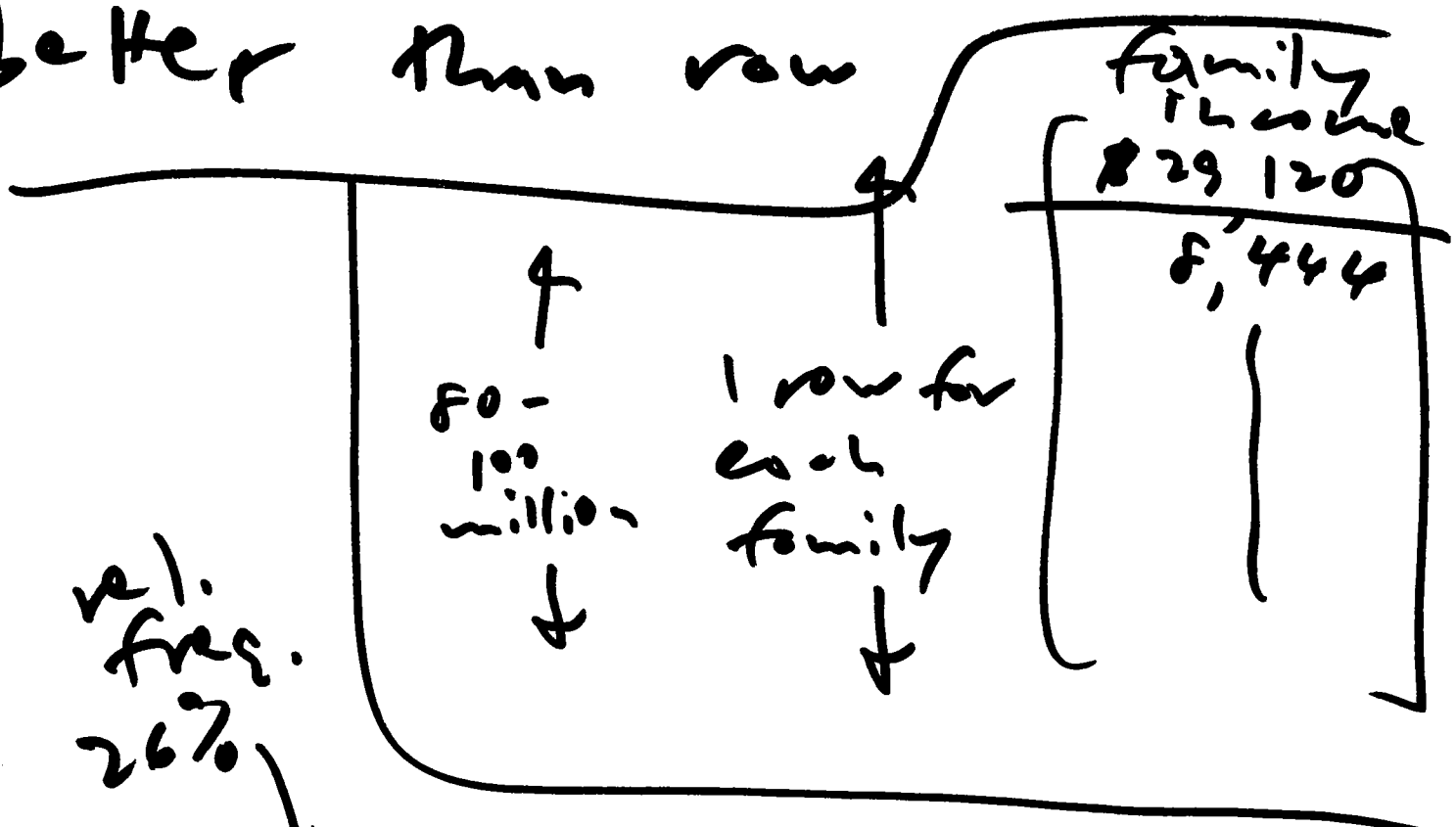
value	count
26	1
27	4
28	0
29	1
:	:
93	4
94	0
95	2

(1/223) \* 100%

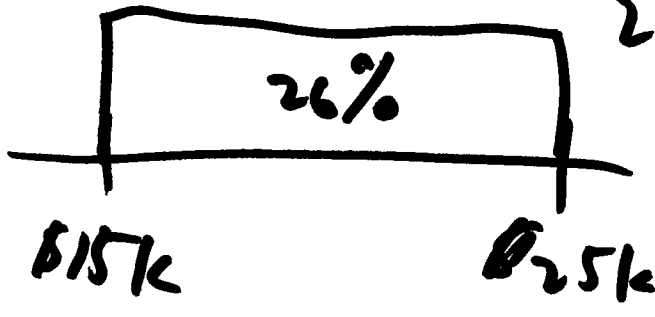
26	1
27	4
27	
27	
27	
27	
29	1
:	:
:	:
95	2
95	

sum n = 223

when comparing 2 data sets with different n, rel. freq. hist. better than raw



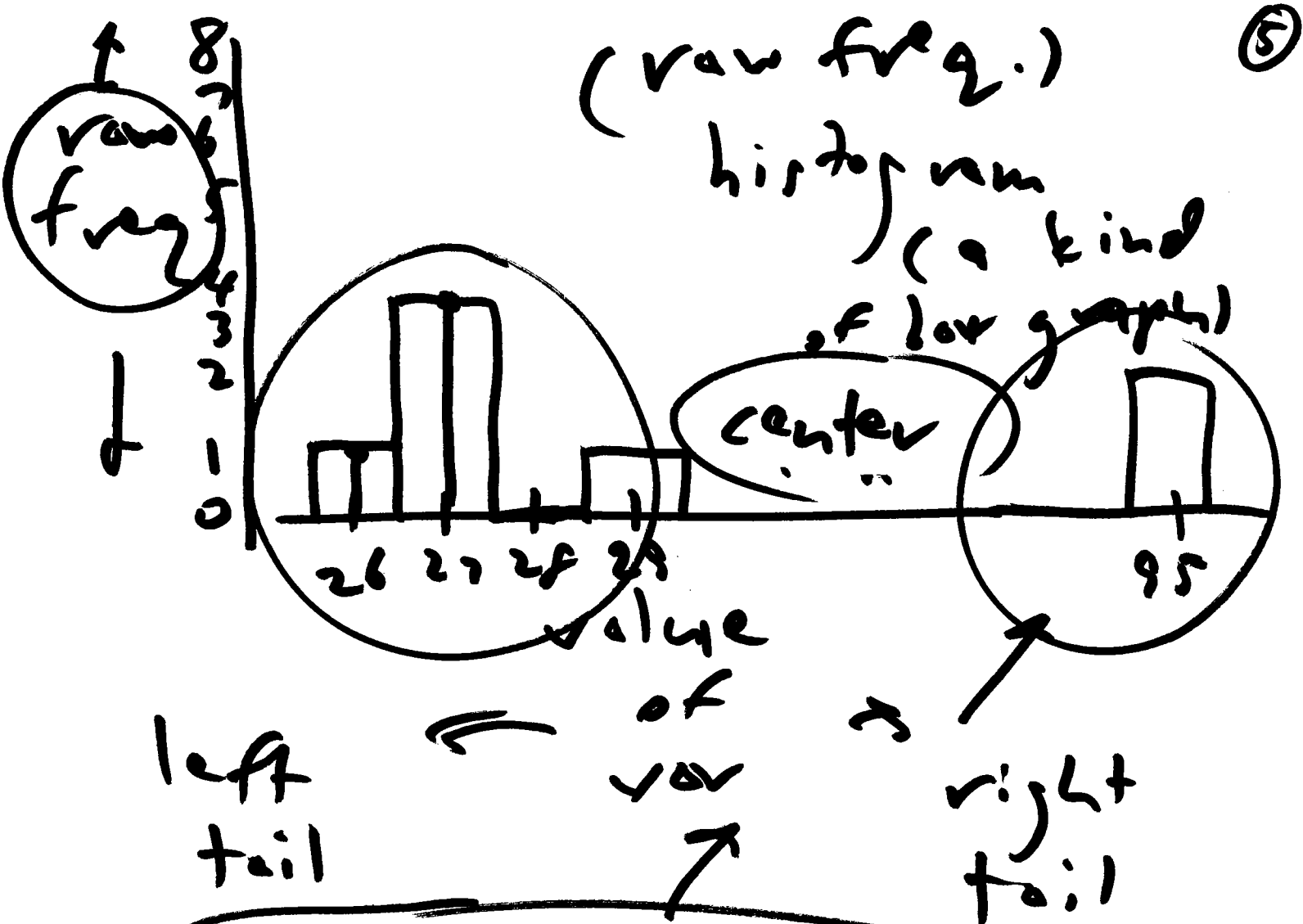
rel. freq.  
 26%



$2.6\% / 1000$

$26\% = \left( \frac{2.6\%}{1000} \right) (100k)$

on density scale, rel. freq is represented by **AREA** under hist



graphical descriptive summary

