

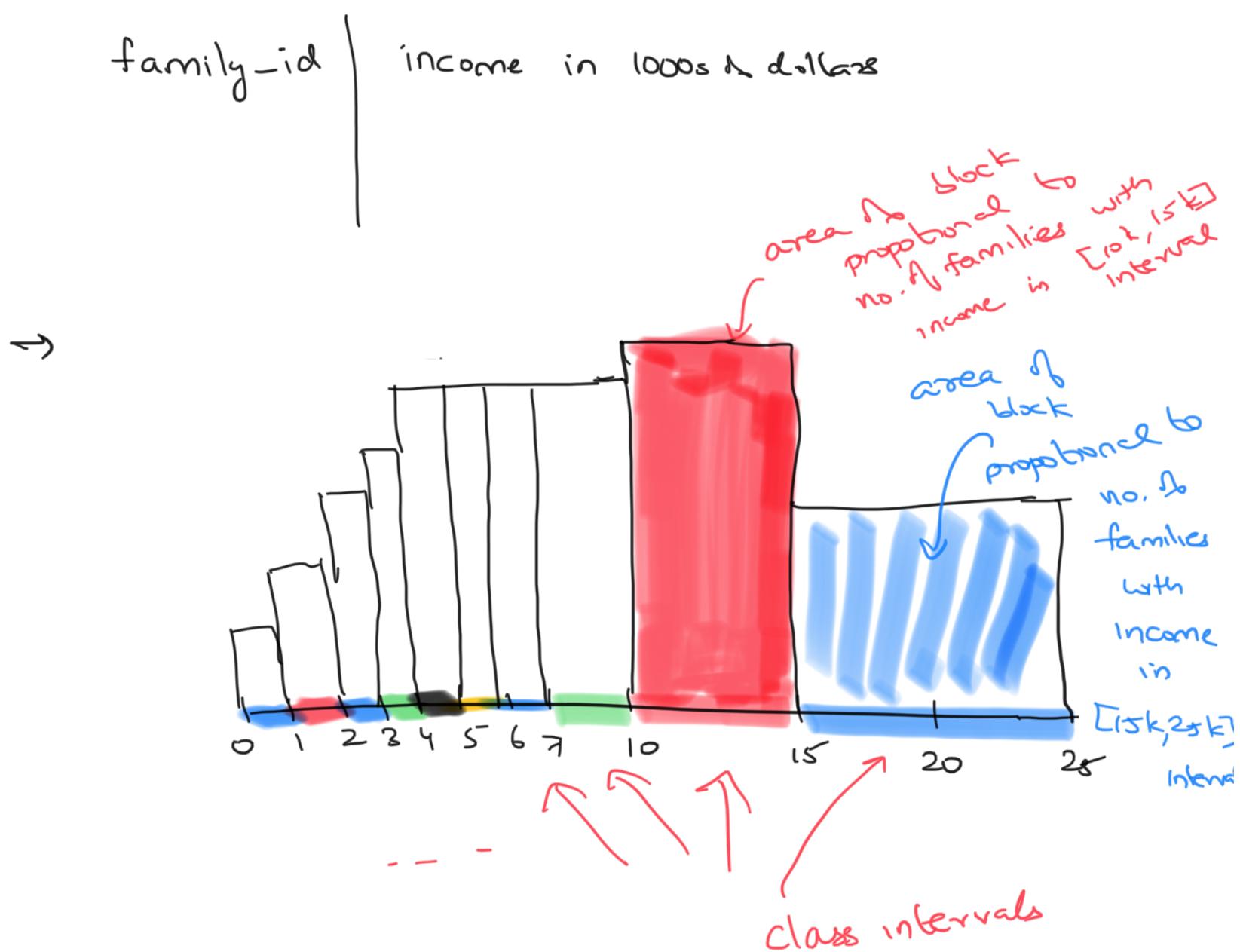
## Day 3 - Histograms

Histograms - graphs to summarize data

→ no vertical scale

→ set of blocks

### Data

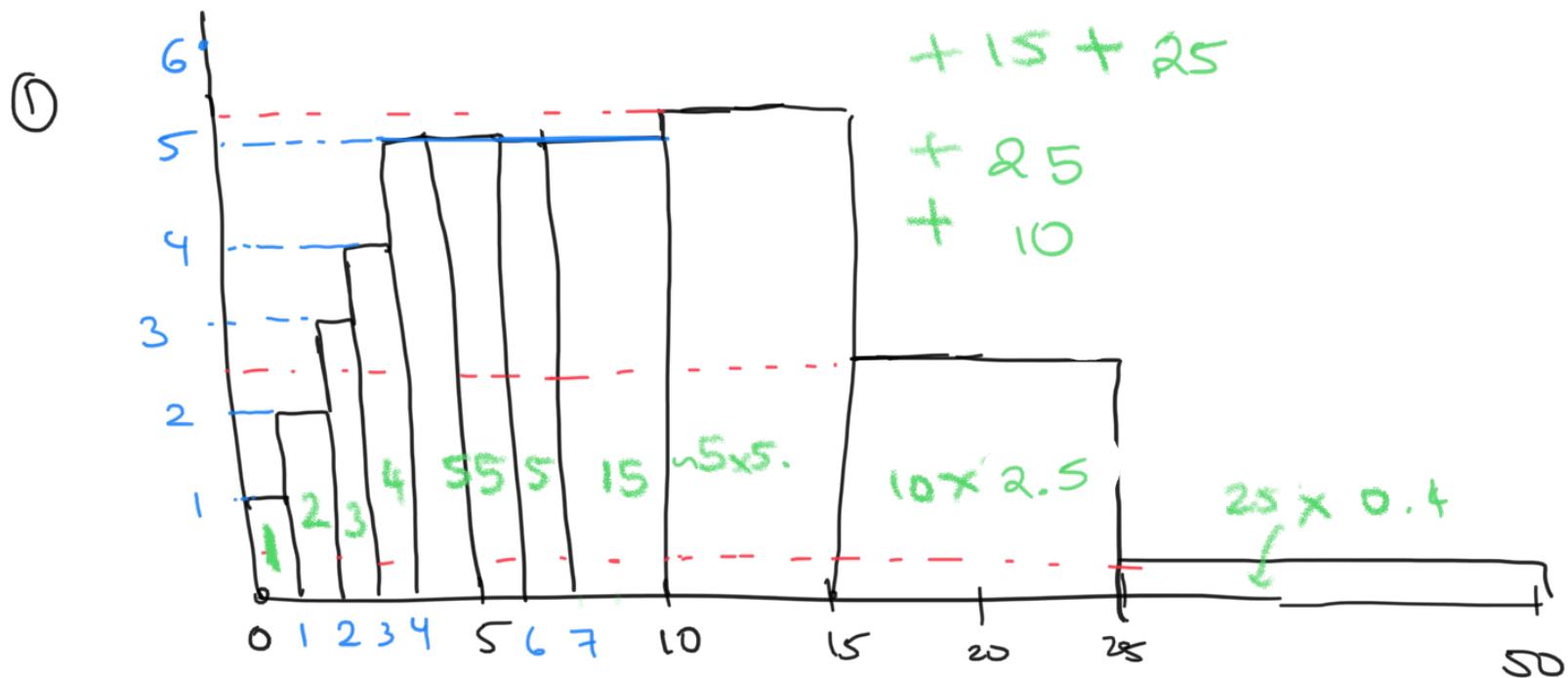


area of  $\leftrightarrow$  area of   
So same % of families.

Areas of blocks  $\leftrightarrow$  % of population in the corresponding class intervals

## Exercises

$$1+2+3+4+5+5+5$$



Given 1% of families had income bet

0 and 1000

D

∴ % of families bet 1000 and 2000? 2%

bet 2000 and 3000 3%

bet 3000 and 4000 4%

bet 4000 and 5000 5%

bet 4000 and 7000 15%

bet 7000 and 10,000 15%

2)

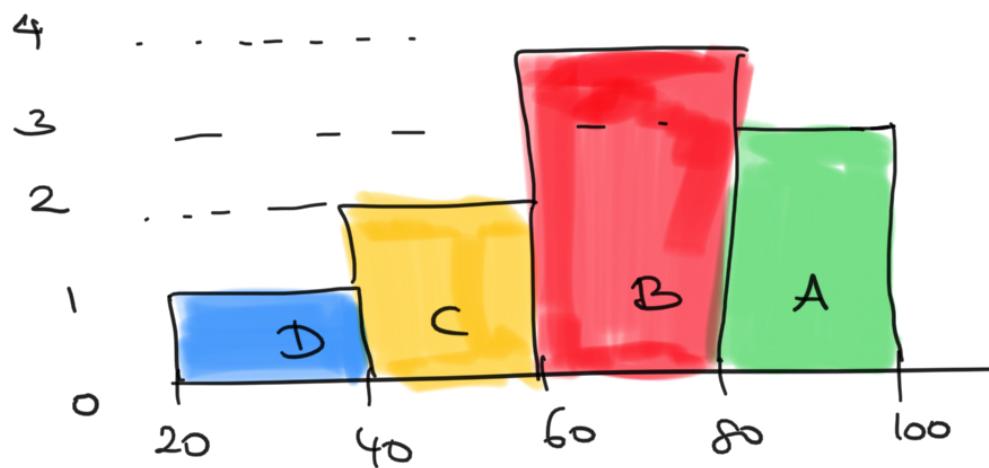
∴ % of families bet 10,000 and 11,000

~ 5

move  
families

∴ % of families bet 15k and 16k ~ 2.5

③ final scores in class



Ⓐ Block rep people bet 60 and 80

Ⓑ 10% scored bet 20 and 40.

what %. scored bet 40 and 60

20%

	area	%	
D	20	10	$\frac{20}{200} \times 100 = 10$
C	40	20	
B	80	40	
A	60	30	
	200	100	

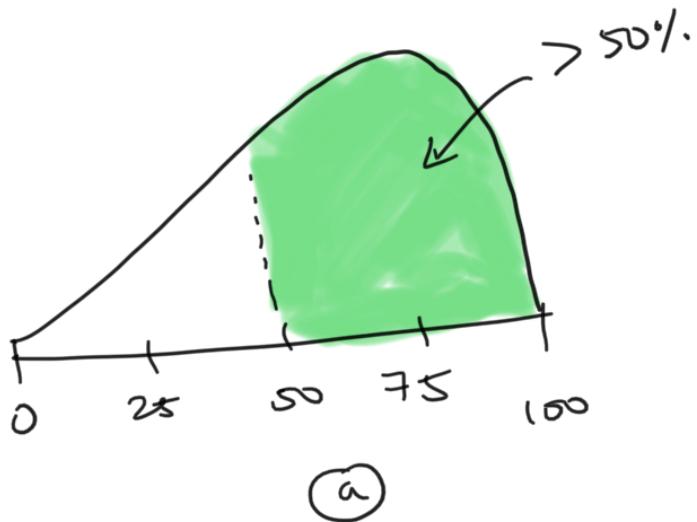
what %. scored over 60? B + A

70%

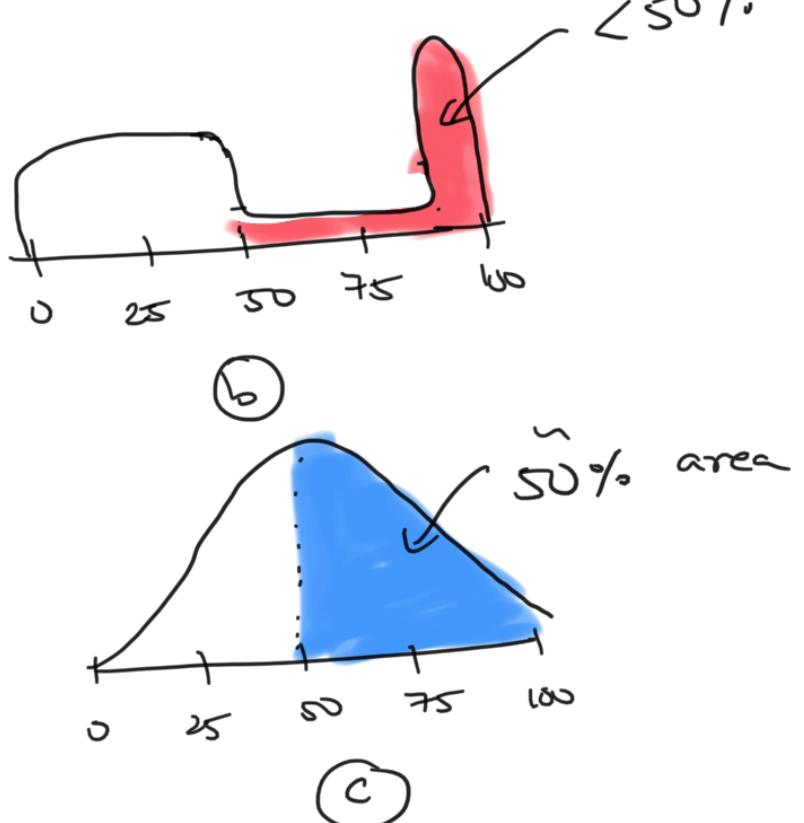
④ 3 classes - sketches do histograms

score range  $[0, 100]$

pass score 50



(a)



(b)  
(c)

- 5) one class in above question had 2 distinct groups, one group doing poorly, one group doing very well. which class?

class b

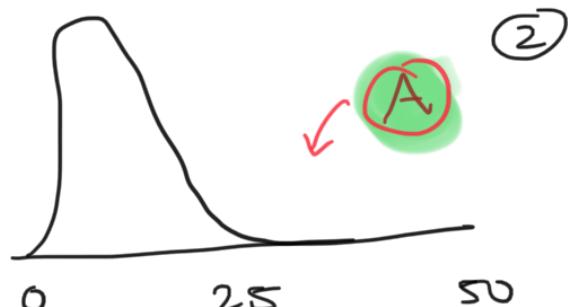
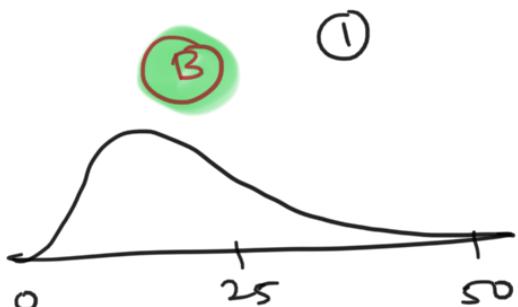
- 6) in class b, more people with scores 40-50 or 90-100?

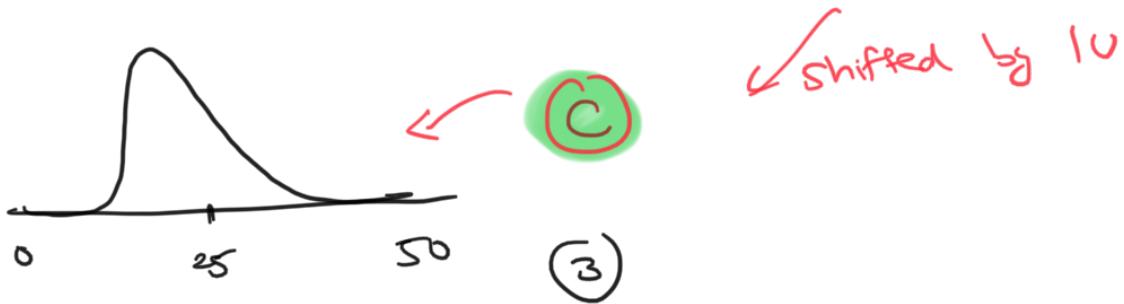
90-100

- 7) hourly wage rates for three groups  
of people (A, B, C)

group B ppl earn twice as much as group A

group C earn \$10 more than group A





8)

not adjusted for inflation . . .

8. The figure below compares the histograms for family incomes in the U.S. in 1973 and in 2004. It looks as if family income went up by a factor of 4 over 30 years. Or did it? Discuss briefly.

