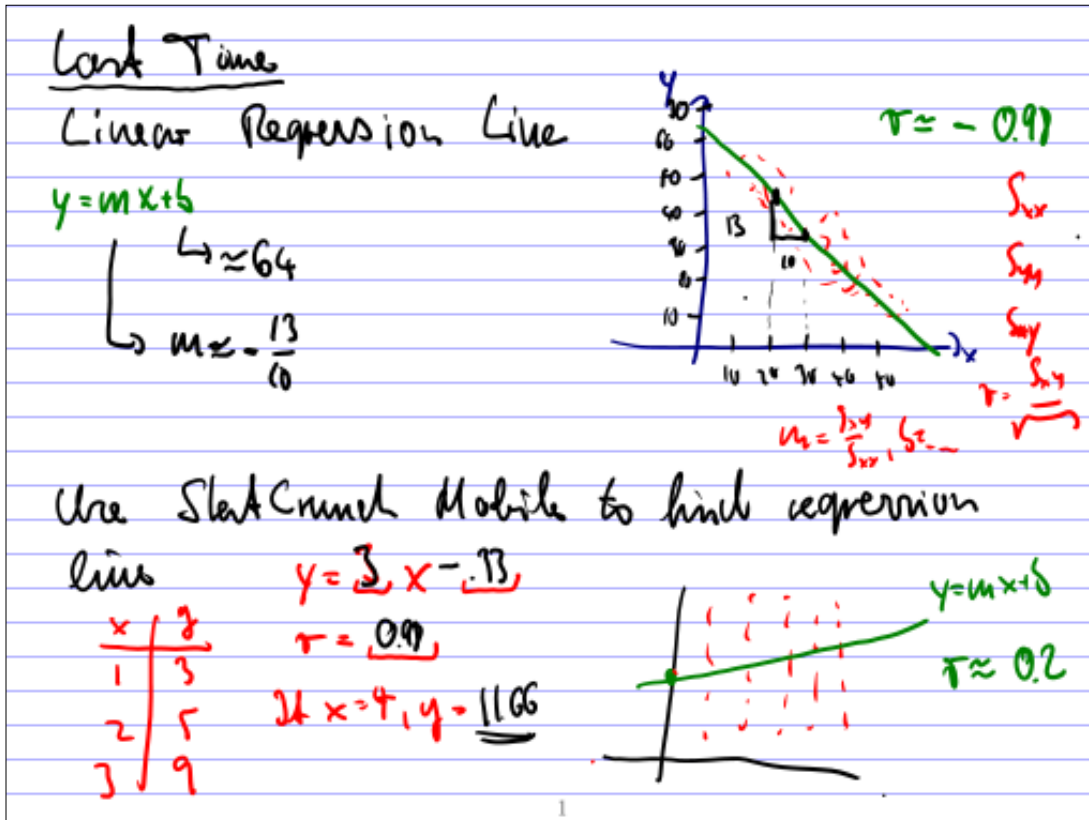
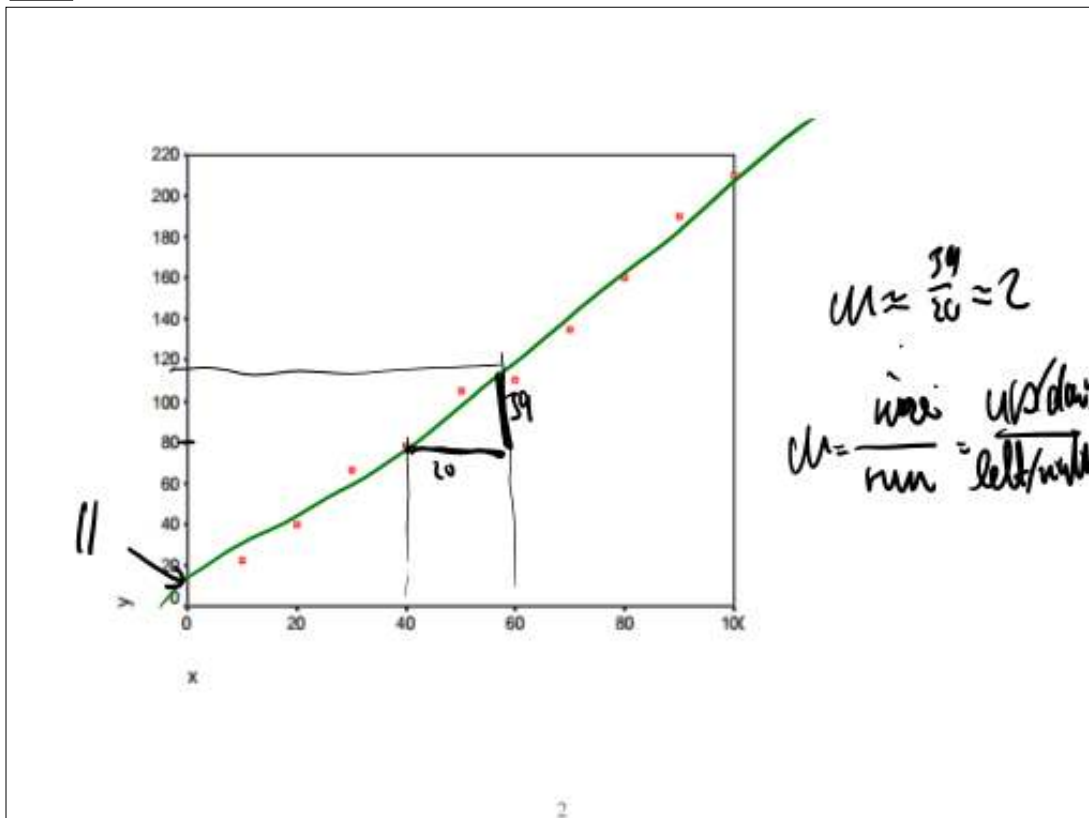


Panel 1



Panel 2



Panel 3

Name: \_\_\_\_\_

Quiz #6

① Suppose some data relating weight of a car to gas mileage is as shown in the table. Use StatCrunch Mobile to

Weight	MPG
1500	32
1750	31
1200	38
2200	27

a) find equation of regression line

$$y = \underbrace{\quad}_{\text{slope}} \cdot X + \underbrace{\quad}_{\text{y-int}}$$

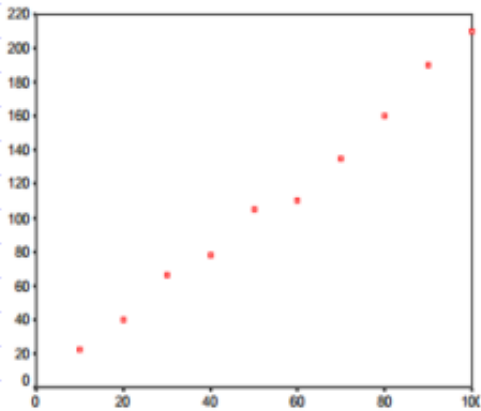
b) predict MPG for a 2000 lb. car.

c) Is your prediction reliable? Explain.

3

Panel 4

② Consider the scatter plot below.



a) Draw the approx. regression line for this data.

b) Give an estimate for  $r$  (correl. coef.) What does it mean?

4

Panel 5

Recall: Probability Theory

1.  $P(E)$  is always between 0 and 1

2.  $P(E) = 0$  means  $E$  won't happen for sure  
 $P(E) = 1$  means  $E$  will happen; no doubt.

3.  $P(\text{Everything}) = 1$

4.  $P(\text{Event}) = 1 - P(\text{opposite event})$

Computed prob. of flipping coins and rolling dice.

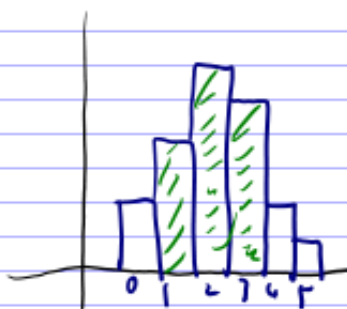
⇒ Next: Prob. via frequency distributions

Panel 6

Ex: Number of children

X	freq. (relative)
0	0.1
1	0.2
2	0.3
3	0.25
4	0.1
5	0.05

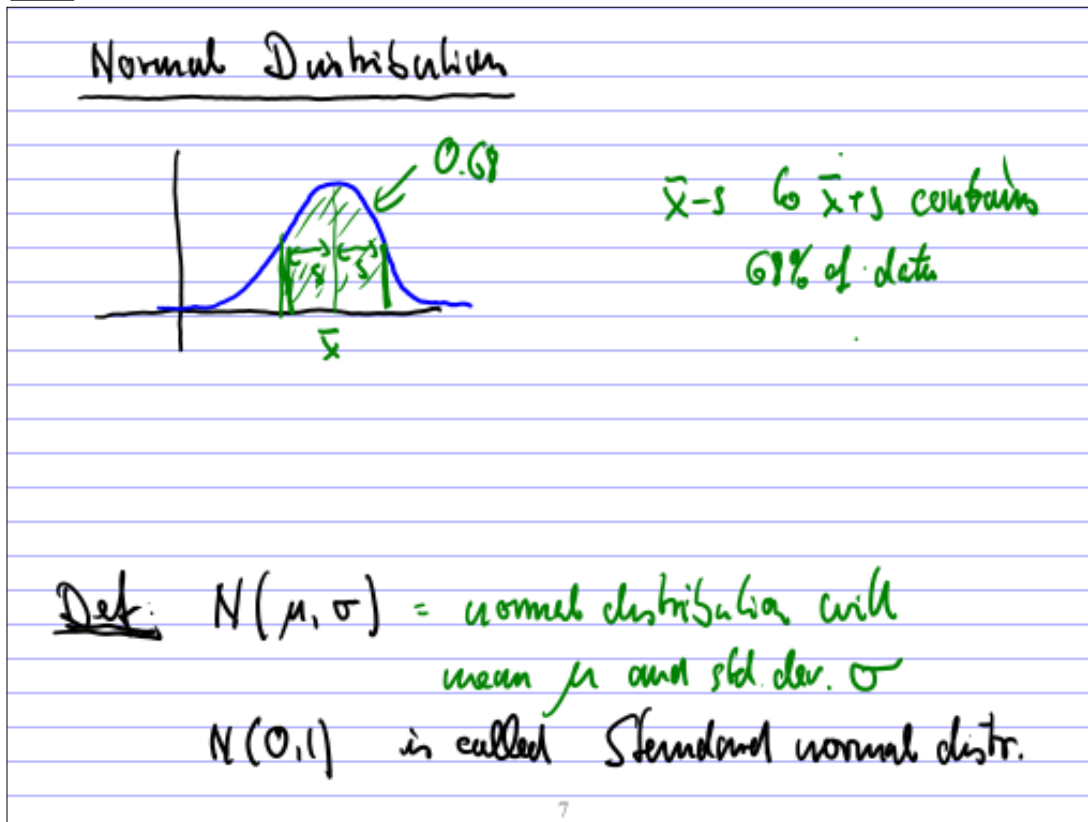
dividing number:



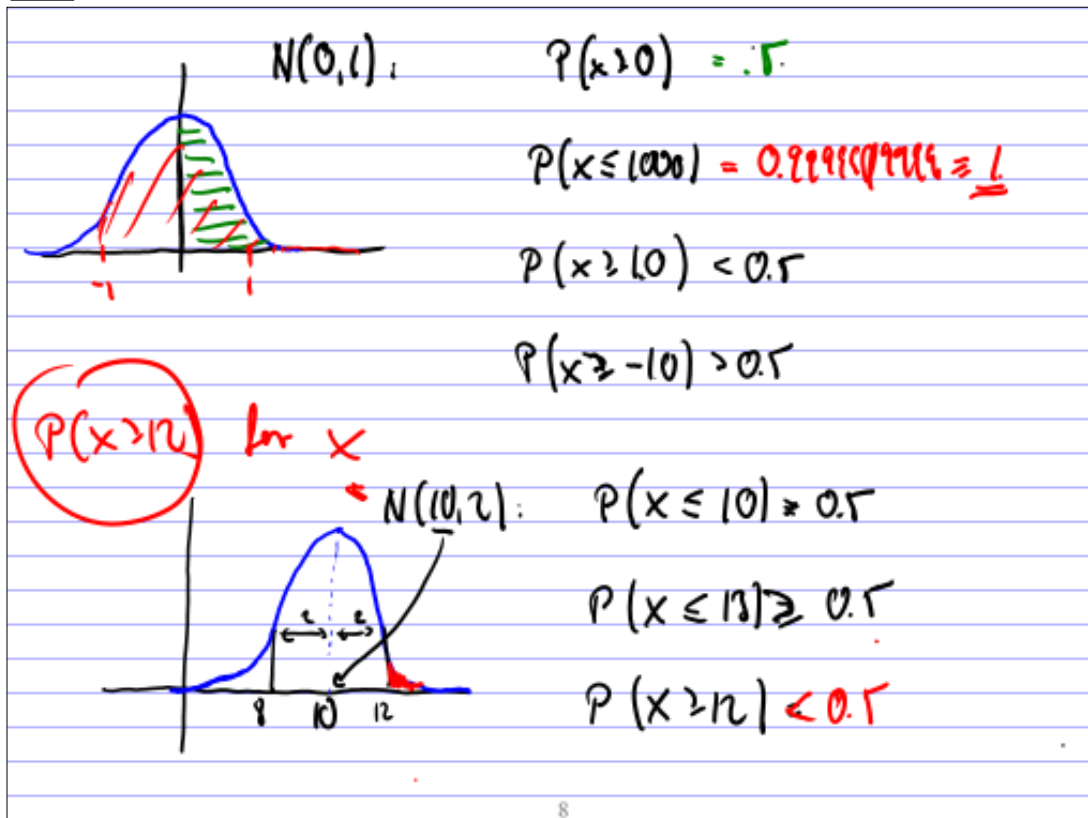
$P(\text{everything}) = 1$

$$P(1 \leq x \leq 4) = \frac{\text{green area}}{\text{total area}} = \frac{\text{green area}}{\text{green area}}$$

Panel 7



Panel 8



Panel 9

