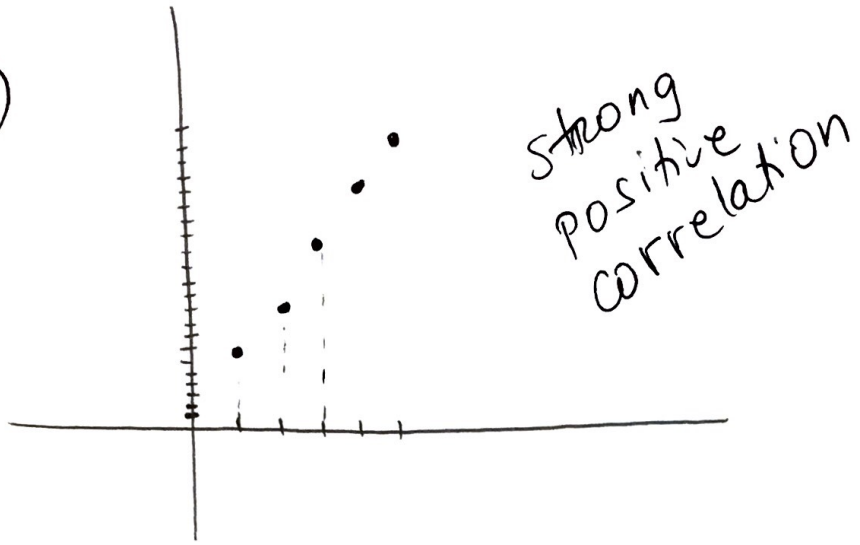
HOMEWORK 2-5

1)



2) THIS QUESTION SHOULD HAD ASKED YOU TO PREDICT THE % of people who will vote in 2006.

USE CASIO CALCULATOR

MENU → #2 (STATISTICS) → enter X values in L1
enter y values in L2

→ (under CALC) press F2 → PRESS F3 (REG)

→ press F1 twice

Answer $y = ax + b$

$y = -0.1x + 256.6$

in 2006 $y = -0.1 \cdot 2006 + 256.6 = 56$

56% of people voted (or will vote) in 2006.

3) USE CALCULATOR steps in question 2

$r = 0.998$
close to 1
strong correlation

$y = 0.485x + 1.635$

4) USE CALCULATOR

$r = -0.9996$
close to -1
strong negative correlation

$y = -1.91x + 0.02$

5) USE CALCULATOR

$r = -0.977$
strong negative correlation

$y = -0.88x + 45.85$

6) a) x = number of years <u>since 2000</u>

L1	L2
1	.461
2	.416
3	.735
4	.735
5	.777
6	1.00
7	1.13

$y = 0.115x + 0.291$
trend line (line of best fit)

b) when 2015 → $x = 15$

$y = 0.115 \cdot 15 + 0.291$

$y = 2.016$ the predicted price of rice in 2015 is \$2.02

c) price \$2.60 is y, $x = ?$

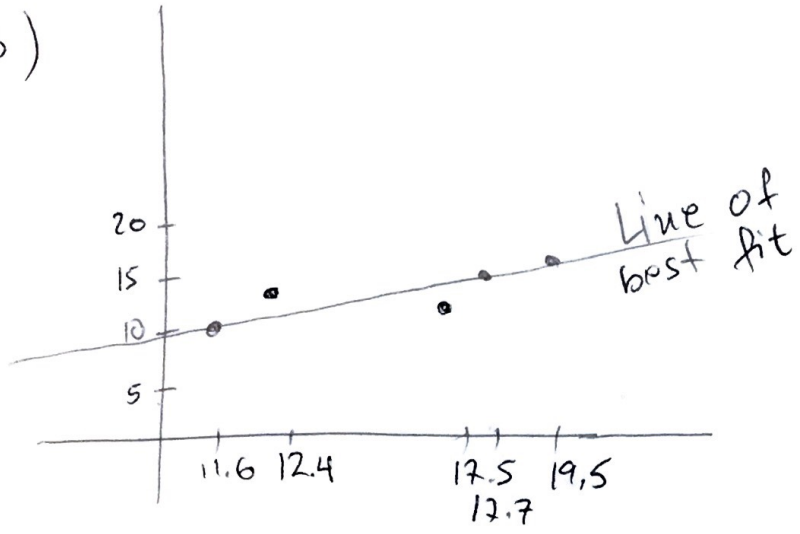
$2.60 = 0.115x + 0.291$
-0.291
$\$2.6$ The price is likely to REACH in 2078.

$\frac{2.9347 = 0.115x}{0.115}$

$77.69 = x \approx 78$

7) a) data for year 1997

b)



$y = 0.59x + 4.99$

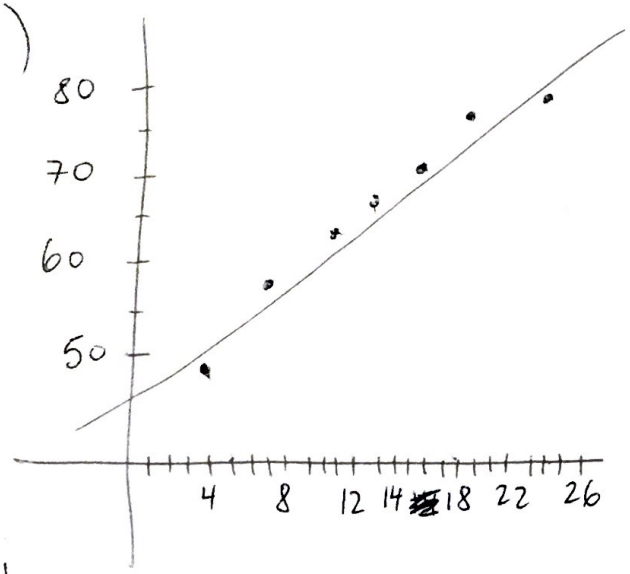
c) $X = 15.5$ $\quad y = 0.59 \cdot 15.5 + 4.99$

$= 14.135$ predicted value for Wyoming in 2006

d) 14.6 is close to the answer c above, therefore line of best fit is fairly accurate.

8)

a)



b) $y = 1.406x + 45.68$

c) in 2022 $X = 22$

$y = 1.406 \cdot 22 + 45.68$

$y = 76.612$