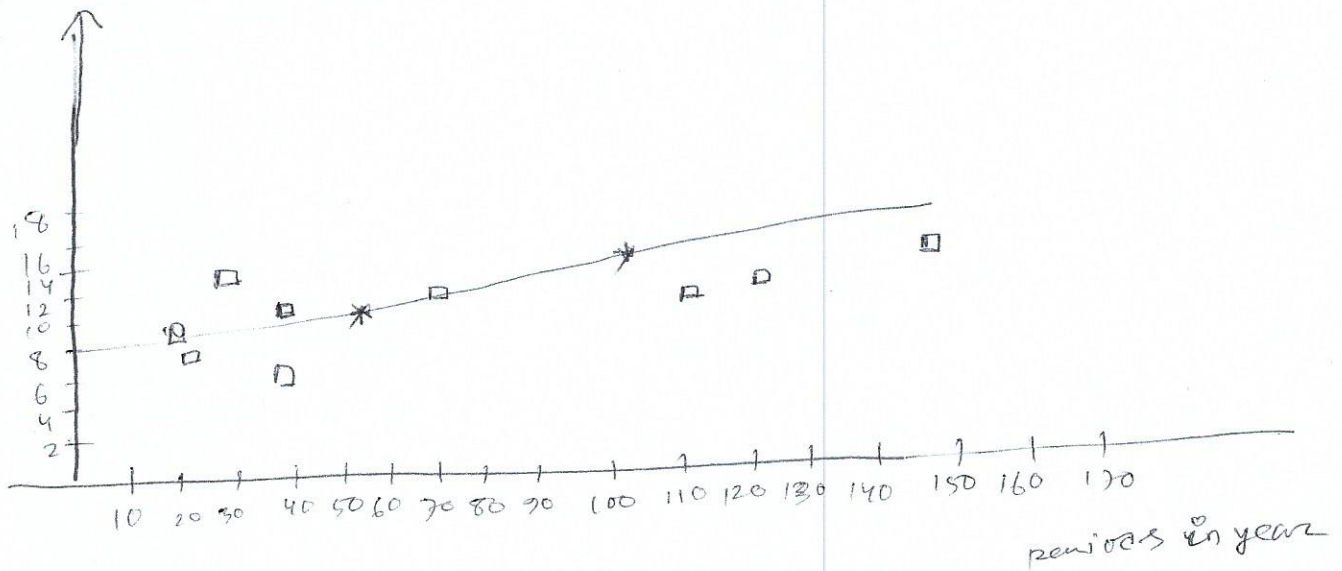


07/18/2019

Life expect  
in years



a)  $r = 0.7257$

There seems to be positive correlation between gestation period and life expectancy in the given sample of animals as, gest period gain so does the life exp.

b)  $\hat{y} = 0.0261x + 7.8738$

c) Slope = 0.0261

1 unit change in gestation ~~at~~ by 1 day, life expectancy increases by 0.0261 yrs.

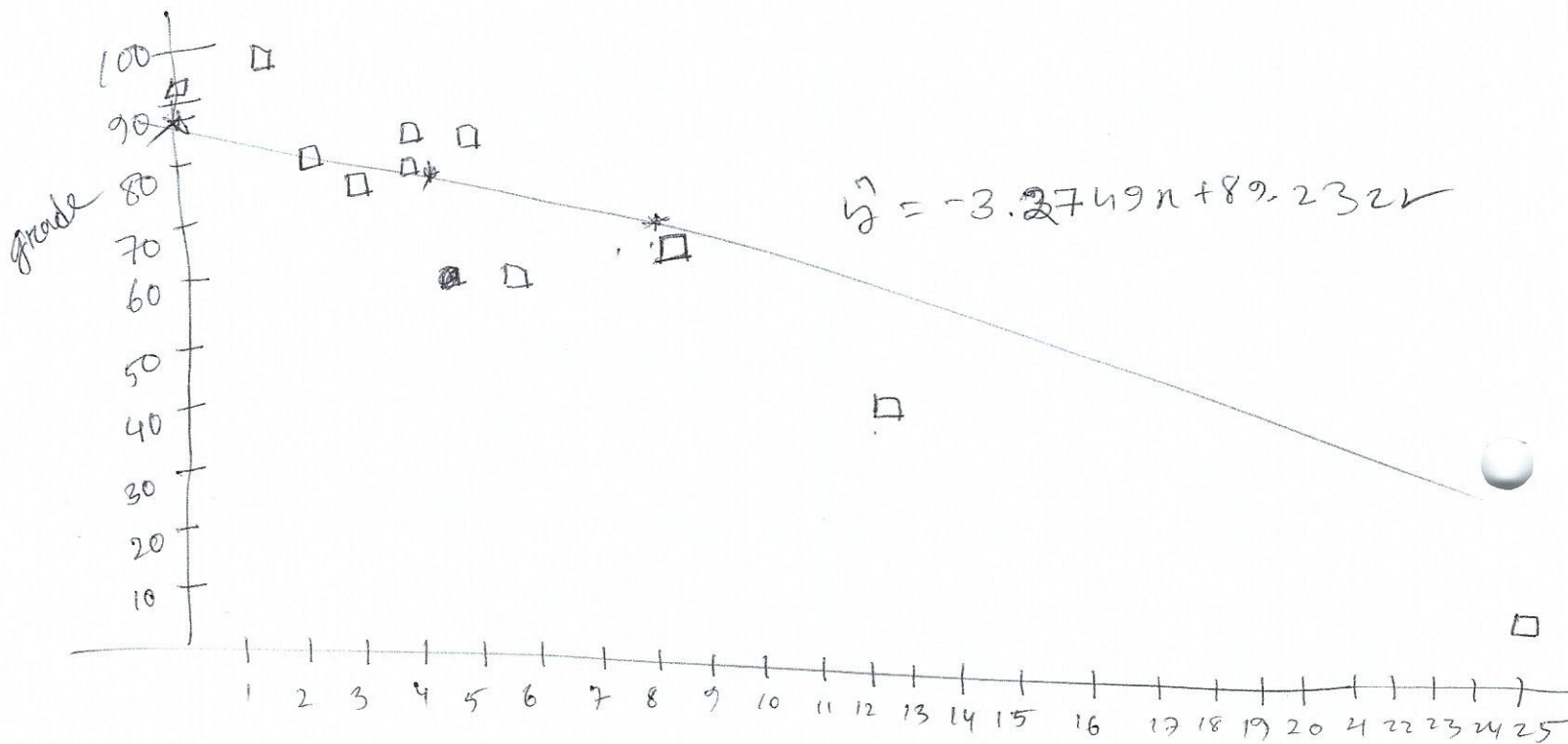
d)  $R^2 = 0.5266$

52.1% of <sup>the variation of</sup> known data ~~data~~ / life expectancy

of an animal in years can be explained by gestation period.

X	$\hat{y}$
50	9.2
100	10.5

$$\hat{y} = 0.0281x + 7.7738$$



b)  $r = -0.9620$ .

there is a negative correlation between the number of observation and grade.

As the obs  $\uparrow$ , the grade  $\downarrow$ .

$$c) \hat{y} = -3.2749x + 89.2322$$

d) slope =  $-3.2749$ . as the number of abs  $\uparrow$  by 1 one day, the grade  $\downarrow$  by about  $3.2749\%$ .

$$e) \hat{y} = -3.2749(6) + 89.2322$$

If the student misses 6 classes he may get about 70% in class.

$$f) 76 = -3.2749x + 89.2322$$

$$x \approx 4$$

4 abs will probably result into getting about 70% in class.

$$R^2 = 0.9254$$

g) ~~92~~ 92.52% of grade % can be predicted by the number of abs<sup>n</sup>,

$$h) y\text{-int.} = 89.2322$$

If a student does not miss any class he/she should get 89% of the marks.

from  $\hat{y}$ :

x	y
4	76
7	66

$$\text{Residual} = \text{observed} - \text{predicted}$$
$$y - \hat{y}$$

$$\text{Residual} = 82 - 76 = 6$$

The residual is above the regression line