

4.2

Q1

$$A = 0.6$$

$$B = -1$$

$$C = -0.4$$

$$D = 0.8$$

Q2 (i) 0.1 = strong pos corr

(ii) -0.8 = strong neg corr

(iii) 0 = No corr

(iv) -1 = perfect neg corr

(v) -0.1 = very weak neg corr

(vi) 0.2 = very weak pos corr

Q3

(i) line of best fit

(ii) Approx an equal N^o of pts lie on either side of the line

(iii) 55 kg

(iv) strong pos corr

Q4

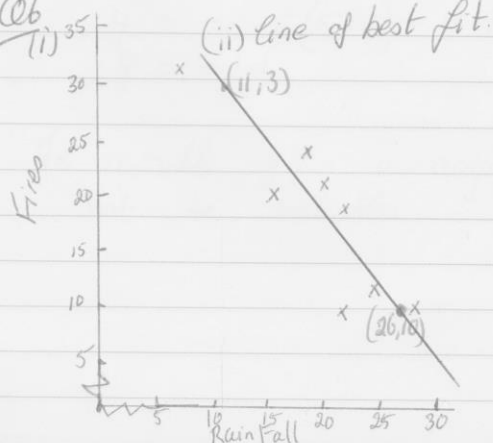
0.86 True

Q5

0.86

Q6

(i)



(iii) $r = -0.9$

(iv) $m = \frac{10-3}{26-11} = 0.47$

$$y - 3 = 0.47(x - 11)$$

$$y - 3 = 0.47x - 5.17$$

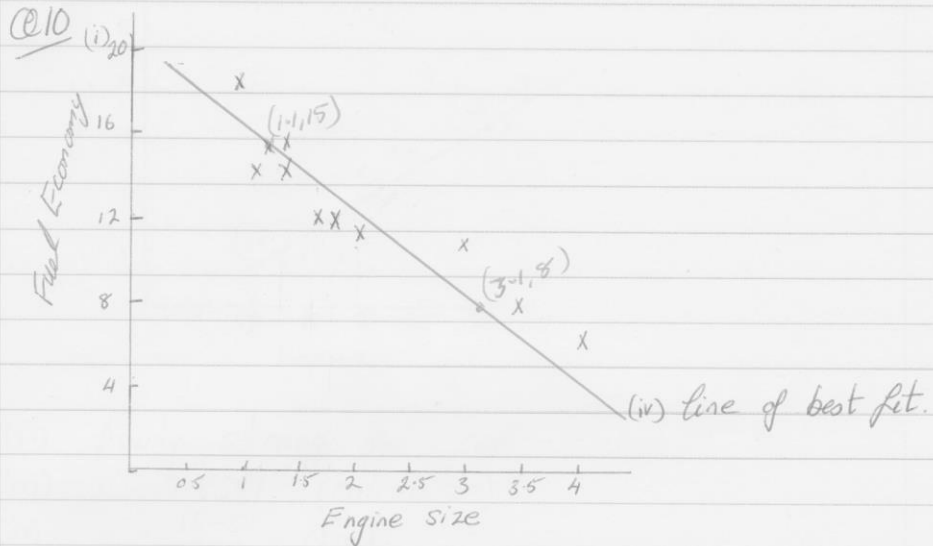
$$y = 0.47x - 2.17$$

(v) $x = 25$

$$y = 0.47(25) - 2.17$$

$$y = 9.58$$

Q8 $r = 0.85$ (calculator)



(ii) strong neg corr

(iii) $r = -0.9250$ (calculator)

(v)

$$m = \frac{15 - 8}{1.1 - 3.1} = -3.5$$

$$y - 15 = -3.5(x - 1.1)$$

$$y - 15 = -3.5x + 3.85$$

$$y = -3.5x + 18.85$$

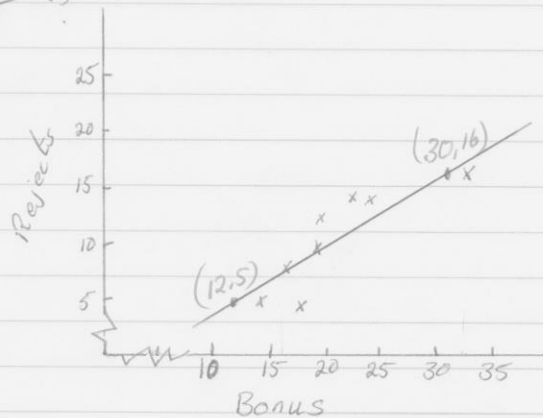
$$x = 5.7$$

$$y = -3.5(5.7) + 18.85$$

$$y = -1.1$$

The result gives a negative ans so this may not be reliable.

Q11 (i)



- (i) fairly strong pos corr
(ii) $r = 0.8591$ (calculator)
(iv) $m = \frac{16-5}{30-12} = 0.61$

$$y - 5 = 0.61(x - 12)$$

$$y - 5 = 0.61x - 7.32$$

$$y = 0.61x - 2.32$$

(v) $y = 9$

$$9 = 0.61x - 2.32$$

$$11.32 = 0.61x$$

$$\frac{11.32}{0.61} = x$$

$$18.557 = x$$

Max bonus should be approx €18.50.