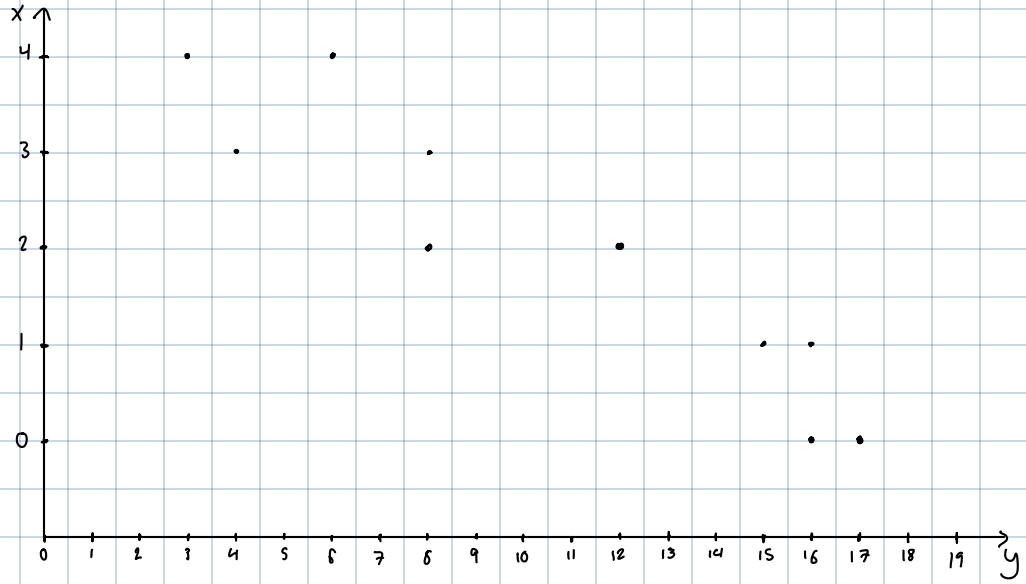
Oppgave 1)



Oppgave 2)

$$r = \frac{\sum_{i=1}^{10}(x_i-\bar{x})(y_i-\bar{y})}{\sqrt{\sum_{i=1}^{10}(x_i-\bar{x})^2}\sqrt{\sum_{i=1}^{10}(y_i-\bar{y})^2}} = \frac{-67}{\sqrt{20 \cdot 256{,}5}} = \frac{-67}{71{,}6240} = \underline{\underline{-0{,}9355}}$$

Oppgave 3)

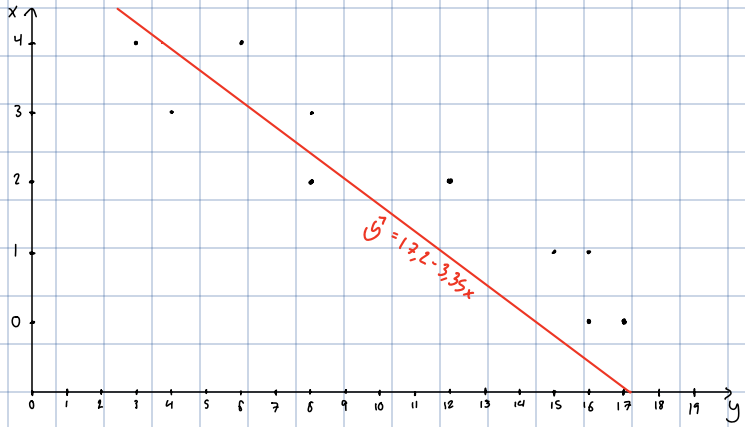
Regresjonslinjen: $\hat{y} = \hat{\alpha} + \hat{\beta} x$

Bruker formelen over for å finne grafen, da må vi regne ut $\hat{\beta}$ og $\hat{\alpha}$:

$$\hat{\beta} = \frac{\sum_{i=1}^{10}(x_i-\bar{x})(y_i-\bar{y})}{\sum_{i=1}^{10}(x_i-\bar{x})^2} = \frac{-67}{20} = -3{,}35$$

$$\hat{\alpha} = \bar{y} - \hat{\beta}\bar{x} = 10{,}5 + 3{,}35 \cdot 2 = 17{,}2$$

$$\hat{y} = 17{,}2 - 3{,}35x$$



Oppgave 4)

$\hat{y}(x) = 17{,}2 - 3{,}35x$

$\hat{y}(3) = 17{,}2 - 3{,}35 \cdot 3 = 17{,}2 - 10{,}05 = \underline{\underline{7{,}15}}$