1. $cov = M(xy) - M(x) \cdot M(y) = 10175.9$

$$r_{xy} = \frac{cov}{\sigma_x \cdot \sigma_y} = 0.89$$

2. $\alpha = 0.05$

$$\bar{x} \pm t_{\alpha/2} \frac{\sigma}{\sqrt{n}}$$

$$118.1 \pm 2.262 \cdot \frac{10.55}{\sqrt{9}} = 116.1 \pm 7.9$$

3. $n = 25 \quad n = 22 \quad \bar{x} = 174.2 \quad \alpha = 0.05$

$$\bar{x} \pm z_{\alpha/2} \frac{\sigma}{\sqrt{n}} \qquad 174.2 \pm 1.96 \cdot \frac{\sqrt{25}}{\sqrt{22}} = 174.2 \pm 1.9$$

4. линейная регрессия