

Correlation and Regression 1 Answers

Question 1

$$r = .55, p > .05$$

$$t_{\text{crit}} = 1.943$$

$$t_{\text{obs}} = 1.61$$

Payroll is not significantly related to success.

Question 2

$\phi = .23, p > .05$. No significant relation between gender and depression.

$$t_{\text{crit}} = 2.08$$

$$t_{\text{obs}} = 1.08.$$

Question 3

$$y' = 13.65 - 2.95x$$

$$y' = 7.75$$

$S_{y,x} = 3.05$, This means that on average our observed values differ from our regression line by 3.05.

F critical (df 1/13) = 4.67, F observed = 17.73, Yes, number of promotions missed does account for a significant proportion of the variability in job satisfaction, $F(1, 13) = 17.73, p < .05$.

t critical ($\alpha = .05$, 2-tail, $df = n - 2$) = (+/- 2.16), t observed = -4.21, Yes, our regression coefficient is significant, $t(13) = -4.21, p < .05$.