Correlation and Regression 2 Answers

Question 1

r = .24, p > .05.

[t crit = 2.05 and t obs = 1.29].

Using the conversion formula, $X^2 = \varphi 2\ N = (.24)^2 .\ 29 = 1.67$.

Question 2

r = -.84, p < .05.

[t crit = -/+2.447 and t obs = -3.81].

With d = .84 and $\delta = 2.20$ for two-tailed test, power = .60.

y' = 5.407 + (-.032)x, therefore if x = 100, then y' = 2.21hrs.

Question 3

(a) r = .91, p < .05 [t crit = -/+2.228, t obs = 7.02].

(b) power = .85

(c) because y' = -36.76 + 5.25x, then if x = 17, y' = 52.49 (or $52,490).

(d) $r^2 = .83$, F (1, 10) = 48.18, p < .05.

(e) b = 5.25, t (10) 6.94, p < .05.

(f) Sy.x = 8.65.