11.1(a): 0.983

11.1(b): $\hat{y} = 34.5 + 0.95x$

11.1(d): $0.950 = \$950$

11.1(e): $34.5 = \$34500$

11.1(f): $45.9 = \$45900$

11.1(g): $40.2 = \$40200$

11.1(h): $(38.957, 41.443)$

11.1(i): $t^* = 10.82$, $t_{\alpha/2,n-p} = t_{0.025,4} = 2.776$, reject H_0, there is a significant linear relationship between years of experience and salary.

11.1(j): $2P(t_{(n-p)} > |t^*|) = 2P(t_{(4)} > 10.82) < 0.001$, significant linear relationship since the p–value is less than α.

11.1(k): 0.00042

11.1(l): $(0.706, 1.194)$, significant linear relationship since the CI excludes 0.

11.1(m): $(31.94, 37.06)$

11.1(n): Yes, since the CI for β_0 excludes 40.

11.1(o): 96.7% of the variability in salaries is explained by the linear relationship with years of experience.