

TABLE 16.4The *F* Table for an Analysis of Regression

Formulas for completing the analysis of regression

Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F_{obt}</i>
Regression	$r^2 SS_Y$	1	$\frac{SS_{\text{regression}}}{df_{\text{regression}}}$	$\frac{MS_{\text{regression}}}{MS_{\text{residual}}}$
Residual (error)	$(1 - r^2) SS_Y$	$n - 2$	$\frac{SS_{\text{residual}}}{df_{\text{residual}}}$	
Total	$SS_{\text{regression}} + SS_{\text{residual}}$	$n - 1$		

Solution to Example 16.3

Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F_{obt}</i>
Regression	12.83	1	12.83	28.83*
Residual (error)	2.67	6	0.445	
Total	15.50	7		

An asterisk indicates significance at $p < .05$.