

Call: **1** `lm(formula = UnemploymentRate ~ NoHighSchool, data = communities)` **2**

Residuals: **3** Difference between the observed values and predicted values of UnemploymentRate

	Min	1Q	Median	3Q	Max
	-0.42347	-0.08499	-0.01189	0.07711	0.56470

Coefficients: **4** `UnemploymentRate = 0.078952 + ( 0.742385 * NoHighSchool )`

	Estimate	Std. Error	t value	Pr(> t )	<b>5</b> p-value ( asterisks indicate significance level )
(Intercept)	0.078952	0.006483	12.18	<2e-16 ***	* means p < 0.05
NoHighSchool	0.742385	0.014955	49.64	<2e-16 ***	** means p < 0.01
---	<b>6</b> Standard Error			<b>7</b> t-value = coefficient / std. error	*** means p < 0.001

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1352 on 1992 degrees of freedom

Multiple R-squared: 0.553, Adjusted R-squared: 0.5527 **8** R-squared and Adjusted R-Squared: 55.27% variance explained by the model.

F-statistic: 2464 on 1 and 1992 DF, p-value: < 2.2e-16

#	Description
<b>1</b>	The <i>dependent</i> variable, also sometimes called the outcome variable. We are trying to model the effects of <code>NoHighSchool</code> on <code>UnemploymentRate</code> so <code>UnemploymentRate</code> is the <i>dependent</i> variable.
<b>2</b>	The <i>independent</i> variable or the predictor variable. In our example, <code>NoHighSchool</code> is the <i>independent</i> variable.
<b>3</b>	The differences between the observed values and the predicted values are called <i>residuals</i> . R produces a summary of the residuals.
<b>4</b>	<p>The <i>coefficients</i> for the intercept and the <i>independent</i> variables. Using the <i>coefficients</i> we can write down the relationship between the <i>dependent</i> and the <i>independent</i> variables as:</p> $\text{UnemploymentRate} = 7.8952023 + ( 0.7423853 * \text{NoHighSchool} )$ <p>This tells us that for each unit increase in the variable <code>NoHighSchool</code>, the <code>UnemploymentRate</code> increases by 0.7423853.</p>
<b>5</b>	The <i>p-value</i> for each of the coefficients in the model. Recall that according to the null hypotheses, the value of the coefficient of interest is zero. The <i>p-value</i> tells us whether can reject the null hypotheses or not.
<b>6</b>	The <i>standard error</i> estimates the standard deviation of the sampling distribution of the coefficients in our model. We can think of the <i>standard error</i> as the measure of precision for the estimated coefficients.
<b>7</b>	The <i>t statistic</i> is obtained by dividing the <i>coefficients</i> by the <i>standard error</i> .
<b>8</b>	The <i>R-squared</i> and <i>adjusted R-squared</i> tell us how much of the variance in our model is accounted for by the <i>independent</i> variable. The <i>adjusted R-squared</i> is always smaller than <i>R-squared</i> as it takes into account the number of <i>independent</i> variables and degrees of freedom.