

TABLE 9.2 The Differences and Similarities Between the z Test and t Test

	z Test	t Test
What is the obtained value?	z statistic, p value	t statistic, p value
What distribution is used to locate the probability of obtaining a sample mean?	Normal distribution	t distribution
What is the denominator of the test statistic?	Standard error	Estimated standard error
Do we know the population variance?	Yes	No. The sample variance is used to estimate the population variance
Are degrees of freedom required for this test?	No, because the population variance is known	Yes. The degrees of freedom for a t test are equal to the degrees of freedom for sample variance for a given sample: $n - 1$
What does the test measure?	The probability of obtaining a measured sample outcome	
What can be inferred from the test?	Whether the null hypothesis should be retained or rejected	