What is the Two Sample Z-Test Calculator used for?

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The Two Sample Z-Test Calculator is a statistical tool used to compare the means of two independent samples. It calculates the z-score, a measure of how many standard deviations a data point is away from the mean, for each sample and determines whether there is a significant difference between the two means. This calculator is commonly used in research and data analysis to determine if there is a significant difference between two groups or populations, and to make conclusions about the effectiveness of a particular intervention or treatment. It is a useful tool for making informed decisions in various fields such as healthcare, business, and social sciences.

Two Sample Z-Test Calculator

```
@import
url('https://fonts.googleapis.com/css?family=Droid+Serif|Raleway');

.axis-y .domain {
display: none;
}

h1 {
text-align: center;
font-size: 50px;
margin-bottom: 0px;
font-family: 'Raleway', serif;
}

p {
color: black;
margin-bottom: 15px;
```

```
margin-top: 15px;
font-family: 'Raleway', sans-serif;
}

#words {
color: black;
font-family: Raleway;
max-width: 550px;
margin: 25px auto;
line-height: 1.75;
padding-left: 100px;
}

#words_calc {
color: black;
font-family: Raleway;
max-width: 550px;
margin: 25px auto;
line-height: 1.75;
padding-left: 100px;
}

#words_calc input {
display: inline-block;
vertical-align: baseline;
```

```
width: 350px;
max-height: 35px;
}

#hr_top {
width: 30%;
margin-bottom: 0px;
border: none;
height: 2px;
color: black;
background-color: black;
}

#hr_bottom {
width: 30%;
margin-top: 15px;
border: none;
height: 2px;
color: black;
background-color: black;
}

#words label, #words input {
display: inline-block;
vertical-align: baseline;
```

```
width: 350px;
max-height: 35px;
}

#buttonCalc {
border: 1px solid;
border-radius: 10px;
margin-top: 20px;
padding: 10px 10px;
cursor: pointer;
outline: none;
background-color: white;
color: black;
font-family: 'Work Sans', sans-serif;
border: 1px solid grey;
/* Green */
}

#buttonCalc:hover {
background-color: #f6f6f6;
border: 1px solid black;
}

#words_output {
text-align: center;
```

```
}

#solution_div {
text-align: center;
}

#words_intro {
color: black;
font-family: Raleway;
max-width: 550px;
margin: 25px auto;
line-height: 1.75;
}

#words_table {
color: black;
font-family: Raleway;
max-width: 350px;
margin: 25px auto;
line-height: 1.75;
}

.text_areas {
color: black;
font-family: Raleway;
```

max-width: 350px;
margin: 25px auto;
line-height: 1.75;
}

.label_radio {
text-align: center;
}

A two sample z-test is used to test whether or not the means of two populations are equal when the population standard deviations are known.To perform a two sample z-test, simply fill in the information below and then click the Calculate" button.

Sample 1

Sample 2

z = -1.608761

p-value (one-tailed) = 0.060963

p-value (two-tailed) = 0.121926

//set summary table to hidden to start

```
var summary_display =
document.getElementById("summary_table");
summary_display.style.display = "none";

//find which radio button is checked
function check() {
if (document.getElementById('raw').checked) {
var table_display =
document.getElementById("words_table");
table_display.style.display = "block";
var summary_display =
document.getElementById("summary_table");
summary_display.style.display = "none";
} else {
var table_display =
document.getElementById("words_table");
table_display.style.display = "none";
var summary_display =
document.getElementById("summary_table");
summary_display.style.display = "block";
}

} //end check

//perform one-sample z-test
```

```
function calc() {
if (document.getElementById('summary').checked) {
var x1 = +document.getElementById('x1').value;
var s1 = +document.getElementById('s1').value;
var n1 = +document.getElementById('n1').value;
var x2 = +document.getElementById('x2').value;
var s2 = +document.getElementById('s2').value;
var n2 = +document.getElementById('n2').value;

var z = (x1-x2)/(Math.sqrt((s1*s1)/n1 - (-1*(s2*s2)/n2)));
var p1 = jStat.ztest(z)/2;
var p2 = p1*2;

document.getElementById('z').innerHTML =
z.toFixed(6);
document.getElementById('p1').innerHTML =
p1.toFixed(6);
document.getElementById('p2').innerHTML =
p2.toFixed(6);
} else {
var raw1 =
document.getElementById('rawData1').value.split(',').ma
p(Number);
var raw2 =
```

```
document.getElementById('rawData2').value.split(',').map(Number);
var x1 = math.mean(raw1)
var s1 = +document.getElementById('s1').value;
var n1 = raw1.length;
var x2 = math.mean(raw2)
var s2 = +document.getElementById('s2').value;
var n2 = raw2.length;

var z = (x1-x2)/(Math.sqrt((s1*s1)/n1 - (-1*(s2*s2)/n2)));
var p1 = jStat.ztest(z)/2;
var p2 = p1*2;

document.getElementById('z').innerHTML = z.toFixed(6);
document.getElementById('p1').innerHTML = p1.toFixed(6);
document.getElementById('p2').innerHTML = p2.toFixed(6);
}

//output results
}
```