

# What is the area to the left of a given z-score?

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## RECOMMENDED CITATION

stats writer (2024). *What is the area to the left of a given z-score?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=142991>

The area to the left of a given z-score refers to the cumulative probability of all values that are less than the specified z-score in a standard normal distribution. This area represents the proportion of the total population that falls below the given z-score. It is a measure of the probability of obtaining a value lower than the z-score in a normal distribution. This area is commonly used in statistical analysis and can be calculated using a z-table or a statistical software program.

## Area To The Left of Z-Score Calculator

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

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

```
h1 {  
color: black;  
text-align: center;  
margin-top: 15px;  
margin-bottom: 0px;  
font-family: 'Raleway', sans-serif;  
}
```

```
h2 {  
color: black;  
font-size: 20px;
```

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

```
p {  
color: black;  
text-align: center;  
margin-bottom: 15px;  
margin-top: 15px;  
font-family: 'Raleway', sans-serif;  
}
```

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

```
#words_intro_center {  
text-align: center;  
color: black;
```

```
font-family: Raleway;  
max-width: 550px;  
margin: 25px auto;  
line-height: 1.75;  
}
```

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

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

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

```
font-size: 20px;  
margin-bottom: 0px;  
font-family: 'Raleway', serif;  
}
```

```
#hr_top {  
width: 30%;  
margin-bottom: 0px;  
margin-top: 10px;  
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;  
}
```

```
.input_label_calc {
```

```
display: inline-block;  
vertical-align: baseline;  
width: 350px;  
}
```

```
#button_calc {  
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 */  
}
```

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

```
.label_radio {
```

```
text-align: center;  
}
```

This calculator finds the area to the left of a certain in the normal distribution. Simply enter the z-score below and then click the Calculate" button.

Area to the Left of Z-Score: 0.36693

```
function calc() {  
  //get input values  
  var z1 = document.getElementById('z1').value*1;  
  var area = 1;  
  
  //find area  
  
  area = jStat.normal.cdf(z1, 0, 1 );  
  
  //output  
  document.getElementById('area').innerHTML =  
  area.toFixed(5);  
}
```