设斯皮尔曼相关系数为r

为了验证斯皮尔曼相关系数是否显著的异于0，我们对其进行假设检验

设定原假设和备择假设为：

在原假设成立的条件下，利用斯皮尔曼相关系数构造出一个统计量使其符合标准正态分布

我们计算检验值，并求出对应的P值与0.01、0.05进行比较

对于在0.01级别显著的系数，我们以一颗完整的五角星作为标志

对于在0.05级别显著的系数，我们以一颗半五角星作为标志

Let the Spearman correlation coefficient be r

In order to verify whether the Spearman correlation coefficient is significantly different from 0, we conduct a hypothesis test on it

The null and alternative hypotheses are set as: H\_0:r=0,H\_1:r\ne 0

Under the condition that the null hypothesis is established, a statistic is constructed by using the Spearman correlation coefficient so that it conforms to the standard normal distribution r\_s\sqrt{n-1}~N\left( 0,1 \right)

We calculate the test value and find the corresponding P value to compare with 0.01, 0.05

For coefficients that are significant at the 0.01 level, we use a complete five-pointed star as a symbol

For coefficients that are significant at the 0.05 level, we use a half-pointed star as a symbol