

MTWTFSS
24/1/24

Calculating Spearman's Coefficient Correlation.

{ METHOD 1st }
When Ranks
are given in
the question.

Q There are some kinds of dishes/food
A, B, C, D, E, F, G; R_1 and R_2 are 2

Individuals who have given their
preferences or ranks for these dishes.

<u>Food</u>	<u>R_1</u>	<u>R_2</u>	<u>$D \{R_1 - R_2\}$</u>	<u>D^2</u>
A	2	1	1	1
B	1	3	-2	4
C	4	2	2	4
D	3	4	-1	1
E	5	5	0	0
F	7	6	1	1
G	6	7	-1	1

$N = 7$

$\sum D^2 = 12$

Step 1:- Calculate the difference between
 $R_1 \text{ \& } R_2 = D$

Step 2: Calculate D^2 and obtain $\sum D^2$.

Step 3: Put values in the formula

$$Rho = \frac{1 - \frac{6 \sum D^2}{N^3 - N}}{1 - \frac{6 \sum D^2}{N(N^2 - 1)}}$$

$$\Rightarrow \frac{1 - \frac{6 \times 12}{7^3 - 7}}$$

$$= \frac{1 - 72}{343 - 7}$$

$$= \frac{1 - 0.214}{1}$$

$$= 0.786$$

$$Rho \text{ or } R = 0.786$$

{ High Positive Correlation }