

From a table you obtained by rolling a 6-sided die find out, if the die is fair (N=36).
 Use chi-2 test with the usual significance level.

| # | observed | expected | o-e | (o-e)*(o-e) | (o-e)*(o-e)/e |
|----------|-----------|----------|-----|-------------|---------------|
| 1 | 1 | 6 | -5 | 25 | 4.166666667 |
| 2 | 5 | 6 | -1 | 1 | 0.166666667 |
| 3 | 9 | 6 | 3 | 9 | 1.5 |
| 4 | 2 | 6 | -4 | 16 | 2.666666667 |
| 5 | 7 | 6 | 1 | 1 | 0.166666667 |
| 6 | 12 | 6 | 6 | 36 | 6 |

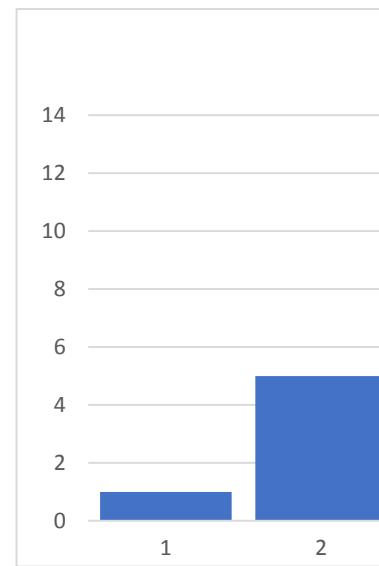
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$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

null hypothesis the die is fair, obersved value=6
alternative hypothesis the die is not fair,oberved value \neq 6

sum:

14.66666667



observed

