Lesson 13.1 Practice: The Chi-Square Goodness-of-Fit Test

School Launch · Statistics · Unit 13: Chi-Square Tests · Worksheet A

Calculator / tables

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. A spinner with 4 equal sections gave counts 16, 20, 20, 4 in 60 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. EASY

2. A spinner with 4 equal sections gave counts 30, 27, 29, 30 in 116 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. EASY

3. A spinner with 4 equal sections gave counts 27, 21, 25, 11 in 84 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. EASY

4. A spinner with 4 equal sections gave counts 20, 20, 15, 29 in 84 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. MEDIUM

5. A spinner with 4 equal sections gave counts 28, 25, 28, 31 in 112 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. MEDIUM

6. A spinner with 4 equal sections gave counts 11, 11, 16, 22 in 60 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. MEDIUM

7. A spinner with 4 equal sections gave counts 15, 6, 14, 5 in 40 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. MEDIUM

8. A die gave counts 30, 24, 27, 23, 32, 26 in 162 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. HARD

9. A die gave counts 12, 19, 15, 21, 19, 22 in 108 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. HARD

10. A die gave counts 12, 17, 16, 22, 16, 25 in 108 trials. Find χ^2 (two decimals), df, and the P-value (four decimals) for a test of fairness. HARD