

1. 5.8
2. $1/17$
3. 400 or 392
4. 0.4
5. 93.5
6. $\frac{2\sqrt{6}}{5}$
7. 0.1
8. 3
9. (5,9)
10. No (fail to reject)
11. Type 1
12. 2520
13. $1/3$
14. 9
15. 1
16. 16
17. 0.3
18. None (no outliers)
19. 14 and 35
20. $\frac{\sqrt{6}}{50}$
21. 0.7
22. ∞
23. (5,-1)
24. $5/7$
25. $\frac{1}{2}$

1. $52/9 = 5.7... = 5.8$
2. $\frac{1.12}{4 \cdot 51} = \frac{1}{17}$
3. $95\% = \pm 2\sigma = 400$
4. 16th percentile is one standard deviation below the mean, the largest value there is 6 ounces, which is 0.38 pounds, rounded to the nearest tenth: 0.4 pounds
5. Expected = $12.5 \cdot 406 = -393.5$, Residual = Observed – Expected = $-300 - (-393.5) = 93.5$
6. $96/100 = r$ squared, so $r = \frac{4\sqrt{6}}{10} = \frac{2\sqrt{6}}{5}$
7. 0.1 (Each digit is independent, so they all have 1/10 chance of being selected)
8. Unemployed Workers, Trophies Won, and Buses can all be COUNTED = 3
9. $6.88 \pm 2 \frac{1.92}{\sqrt{4}} = 6.88 \pm 1.92$
(5,9)
10. Confidence Interval is (17.7,19.3) so we have to fail to reject.
11. Rejected the H_0 , when it was true, Type 1 Error
12. $\frac{7!}{2!} = 2520$
13. Soccer Balls have pentagons on them, so 1/3
14. $(r-1)(c-1) = 3 \times 3 = 9$ degrees of freedom
15. $c(4,4)(0.3)^4 = 0.0081 = 1\%$
16. The value is at plus one standard deviation, so it must be 16.
17. $\frac{\sigma}{\sqrt{n}} = \frac{0.9}{\sqrt{9}} = 0.3$
18. Using the 1.5IQR Rule, there are no outliers.
19. 14 and 35 are Q1 and Q3 (The median of the first 50% and the median of the second 50%)
20. $\sqrt{\frac{(0.4)(0.6)}{100}} = \sqrt{\frac{24}{10000}} = \frac{2\sqrt{6}}{100} = \frac{\sqrt{6}}{50}$

21. $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
 $0.4 + 0.5 - 0.2 = 0.7$
22. Infinity – you can't roll a 7 on a die
23. The point is $(\bar{x}, \bar{y}) = (5, -1)$
24. $84/6 = 14$ for the expected value, so for the chi value: $4/14 + 1/14 + 0/14 + 4/14 = 0/14 + 1/14 = 10/14 = 5/7$
25. 2,3,5 are all prime: so $1/2$