

Elementary Statistics – STA 1020 – Final Exam

Grading Guidelines

- The awarding of partial credit is appropriate. Arithmetic errors should be penalized no more than 1 point each (even for problems where no partial credit is given). If there is obvious evidence of carelessness, you may also penalize lightly. Misunderstanding of a major concept is more serious and requires a more serious penalty.
- The following guidelines are general and do not consider every possible response. In all cases not specifically mentioned, please use your own good judgment to assign partial credit (record this to maintain consistency). If the student clearly knows what he/she is doing award credit accordingly.
- Failure to round answers according to directions should result in a 1 point deduction.
- Points awarded for correct information are minimums. Additional credit may be added for additional partially correct work.
- Good judgement trumps all and please be consistent.

Summary of Partial Credit by Problem

1. No partial credit is available.
2. No partial credit is available.
3. For part (a), award 1 point for the correct formula. Award 1 point for plugging into the formula. Award an additional point for the answer of 3.08. Award an additional point for rounding up to 4. The remaining 2 points are for the answer. For part (b), award 1 point for the correct formula. Award 1 point for the correct l . ($l=12$). Award another 1 point for plugging into the formula. Award an additional point for 54.5. The remaining 2 points are for the answer.
4. Award 1 point for finding the total amount. Award 1 point for the correct formula. Award an additional point for working out the amounts for each color/size. Award 1 point for each probability in the formula. The remaining 2 points are for the answer.
5. Award 1 point for finding the total amount of coins. Award 1 point for each probability in the formula. Award 1 point for the answer.
6. Award 1 point for the correct formula. Award 2 points for each correct probability in the formula. Award 1 point for the final answer.
7. Award at most 1 point if the student shows the correct set-up for each problem. If a student missed part (a), and uses their answer to compute the parts (b)-(d), award full credit as long as the mathematics is correct.
8. For part (a), award 1 point for somehow acknowledging this is an area to the right problem. Award 1 point for the Z-score formula. Award 1 point for plugging in correctly into the formula and an additional point for the correct Z-score. The answer is worth 2 points. If the answer is incorrect, some credit may be awarded for a correct drawing or other relevant work that may be considered for partial credit. For part (b), award 1 point for recognizing that it is area to the left. Award 2 points for finding the correct Z. Award 1 point for the correct formula, 1 point for plugging in values into the formula, and 1 point for the answer. For part (c), award 1 point for if the student acknowledges that this is an area in between problem. Award 1 point for the Z score formula. Award 2 points for each correct Z-score. The remaining

4 points are for the correct set-up, computation, and answer. If a student incorrectly substitutes the values for x and \bar{x} , award at most 2 points for the problem.

9. No partial credit for part (a). For part (b), award 2 points for the correct formula. Award 1 point for the \hat{p} used in (a), 1 point for the critical value, and 1 point for the n plugged in the formula. Award 1 point for the margin of error. Award 2 points for the endpoints of the interval. No partial credit for part (c).
10. If the student recognizes that a narrower interval corresponds to a lower confidence interval, or vice versa, award 1 point. The explanation is worth 3 points and can be demonstrated by working with the margin of error formula or visually with the critical value on the distribution, or explaining that the larger the level of confidence, the more samples the confidence interval must contain.
11. Award 2 points for the hypotheses of the test. Award 2 points for recognition that the true null hypothesis was rejected. Award final 2 points for the correct answer. If the student writes "Type 1 error" with no work shown, award full credit.
12. Award 2 points for the hypotheses, 1 point for the correct \hat{p} , 2 points for the test-statistic, 2 points for the p-value, 1 point for comparing to significance level, 2 points for the decision. Lastly, award 2 points for the conclusion. Any arithmetic errors, deduct 1 point, and then make sure all subsequent steps are correct, based on the incorrect work. If any steps are missing, deduct points for that missing step.
13. For parts (a), (c), and (d), there is no partial credit. For part (b), award 1 point for each correct value in the formula and 1 point for the final answer.
14. No partial credit is available.
15. No partial credit is available for parts (a), (c), and (d). For part (b), award 1 point for title, 2 points for appropriately scaled x and y-axes. Award 2 points for each axis label. Award 5 points for appropriate graphing. Penalization for poorly drawn graphs may not exceed 4 points (assuming all other parts are correctly provided).