

# Math 112—Midterm 1 Rubric

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1. 16 points. 4 points to each part. 2 point for the answer, 2 point for supporting work
2. 4 points. 2 point for the answer, 2 point for supporting work.
3. 12 points. 4 points to each part. 2 point for a substantially correct answer in which there is a minor mistake, the other point for a completely correct answer.
4. 20 points.
  - (a) 8 points. 2 point for each transformation, less 2 point if they are not in a correct order.
  - (b) 8 points. 2 point for labeling points on each graph, 4 points for consistency with their answer in part a, 2 point for correctness (BOA, of course)
  - (c) 4 points. 2 point each for domain and image. Answer can be correct or consistent with their graph above to receive full credit.
5. 4 points. 2 point for each correct description.
6. 8 points. 2 point for the vertical reflection, 2 point for the vertical factor of 2 (or corresponding horizontal factor of  $\sqrt{2}$ ), 2 point for translating right 1, 2 point for translating up 3.
7. 4 points. 2 point for recognizing point-slope form, 2 point for a correct answer.
8. 12 points. 4 points per part. Part a has 1 point each for periodic, period, midline, amplitude. Part b has 4 points for not periodic. Part c has a 1 point for periodic, 1 point for period, and 2 point for the explanation.
9. 20 points. Part a is worth 8 points. 4 points for a correct graph on  $(-4, -1]$  and 4 points for translating periodically. Part b is worth 2 point for the computation. Part c is worth 2 point for the computation. Part d is worth 8 points. 4 points for a solution in  $(-4, -1]$  and 4 points for extending periodically.
- Bonus.** 10 points. 2 point for writing down the definition of even and odd. 4 points for getting to  $-f(x) = f(x)$ . 4 points for getting  $f(x) = 0$  out of that.