Math 1050   Exam #1

Student Name (print): _____

This exam contains 3 pages (including this cover page) and 5 questions. The total number of possible points is 15. Enter your answers in the space provided. Write your final answer on the "Solution" line for each problem, where appropriate. Otherwise, draw a box around your final answer. Complete your solutions to the "show your work" problems on the page indicated.

- **Organize your work**, in a reasonably neat and coherent way, in the space provided. Work scattered all over the page without a clear ordering will receive very little credit.

- **Mysterious or unsupported answers will not receive full credit**. A correct answer, unsupported by calculations, explanation, or algebraic work will receive no credit; an incorrect answer supported by substantially correct calculations and explanations may still receive partial credit.

- **Provide exact answers** unless otherwise instructed.

- **Simplify all answers as much as possible.** This means that you need to need to combine like terms, reduce fractions, etc. (You do not need to rationalize denominators.)

- **Be sure to state units for applied problems.**

- **Clearly identify your answer for each problem.**

Do not write in the table to the right.

Question	Points	Score
1	4	
2	2	
3	2	
4	3	
5	4	
Total:	15	

1. (4 points) Let $f(x)$ be the following expression, $f(x) = 48x + 14$. Determine if $f(x)$ is an element of the set of polynomials.

   YES   NO

   If you circled "YES," write a paragraph indicating why $f(x)$ is an element of the set of polynomials. If you circled "NO," write a paragraph indicating why $f(x)$ is not an element of the set of polynomials.

2. (2 points) Find the zeros of $f(x) = x^3 - x$, then construct a rough graph of $f(x)$.

3. (2 points) Find the zeros of $g(x) = x^2 - 16$ and then construct a rough graph of $g(x)$.

Points earned: _____ out of 8 points

4. (3 points) What is $5 \cdot 3$?
   A. 8   B. 15   C. 2   D. none of the above

4. _____

5. (4 points) What is $\dfrac{\partial z}{\partial t}$ and $\dfrac{\partial z}{\partial s}$ for the equation $z = t \cdot s$.

   ○ t

   ○ s

   ○ z

   ○ I don't know

Points earned: _____ **out of 7 points**