

231 Diagnostic Quiz

Fall 2001

Because this is a diagnostic quiz, you will be get 15 points for completing this quiz to the best of your ability (regardless of how many questions you answer correctly). If you have not taken calculus before there will be some questions you do not know how to answer; that's okay. Don't worry if you can't answer every question on this quiz, I'm just trying to get a sense of what you know coming into this class.

No calculators on this quiz.

1. Factor the expression $x^4 - 16$ as much as possible.

2. Find the solutions to the equation $x^2(3x - 5) = 2x$.

3. Find the solution set of the inequality $|2x - 3| > 7$.

4. Given that $r = \frac{s + 3}{s - 2}$, solve for s in terms of r .

Keep going →

5. If $f(x) = \frac{x^2 + 3}{x - 1}$, what is $f(x + 2)$?

6. What is a polynomial function?

7. Sketch a rough graph of the function $f(x) = (x - 2)^3$.

8. What does it mean to say that $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2} = 4$?

9. What is the definition of the *derivative* of a function $f(x)$?

10. Find the derivative of the function $f(x) = 3x^5 - 4x^2 + 5$.