

231 Diagnostic Quiz

Fall 2002

This is a diagnostic quiz and will not affect your grade. 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 $f(x) = 3x^5 - 4x^2 + 5$.