

V63.0005.002, Spring 2002
Mathematical Thinking
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Quiz 8

Answer questions on this paper or on a separate sheet. Show your work wherever appropriate.

1. Solve the equation $\frac{x+3}{x^2-x} = \frac{8}{x^2-1}$.

2. Let $f(x) = \frac{x^3 - 3x^2 + 2x}{x - 1}$.

(a) What is the domain of the function?

(b) Draw a rough sketch to indicate what the graph of $f(x)$ might look like. (Hint: you may want to simplify the expression somewhat first.) Don't worry about being precise, just draw enough to indicate the overall shape. Explain why you think it should have this shape. How does the answer to part (a) affect the picture?