

Show all work clearly and in order, and circle your final answers.

Justify your answers algebraically whenever possible.

You have 20 minutes to take this 6 point quiz.

1. (2 points) Find the domain of the function $f(x) = \frac{\sqrt{x-6}}{x^2-4}$.

2. (2 points) Compute the difference quotient $\frac{f(x+h)-f(x)}{h}$ for the function $f(x) = 4x^3$ and simplify.

3. (2 points) Find an expression for the function whose graph is the given curve (comprised of two straight lines and a semicircle).

