Name: _____

Clear your desk of everything excepts pens, pencils and erasers. If you have a question raise your hand and I will come to you.

1. (2 points) **Multiple Choice. No work needed. No partial credit available.** The tangent line to the curve $y = \frac{1}{x^2-1}$ is horizontal at the following points:

   A. $x = 0$ and $x = 1$.

   B. $x = 0$ only.

   C. $x = 1$ and $x = -1$.

   D. $x = 1$ only.

   E. None of the above.

2. (1 point) **Fill-in-the-Blank. No work needed. No partial credit available.** The limit

$$\lim_{t \to 0} \frac{\sin(2t)}{\sin(t^3 + 3t)}$$

   is _____.

Extra Work Space.

Continue on to back side

3. (2 points) Find the derivative of the function $f(x) = \sin(\frac{x}{x+\sqrt{x}})$. You do not need to simplify your answer.