Name: ________________________________

Clear your desk of everything except 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 _______________.

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**Extra Work Space.**

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