

Math 1271 Quiz 2  
TA: Brendon Rhoades  
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1.[5 pts.] Evaluate  $\lim_{x \rightarrow \infty} \cos\left(\frac{1}{x} - \frac{\pi}{4}\right) \frac{7x^5 + 2x - \frac{3}{x}}{2x^5 + x^4}$ .

2.[5 pts.] The graph of a function  $f(x)$  is shown below. ON THE SAME AXES, draw the graph of  $f'(x)$ .

3.[10 pts.] USING THE LIMIT DEFINITION OF A DERIVATIVE, find the equation of the tangent line to the graph of  $y = 2x^2 - 3$  at the point  $(1, -1)$ .