

231 Quiz 3

February 10, 2011

Name: _____

Name: _____

Name: _____

Work in groups but do NOT split up problems or tasks. You must discuss each problem as a group and agree on a final answer. Hand in one quiz per group.

You may use your hand-written Notebooks but no other materials and no technology at all. Please keep your discussions quiet so as not to disturb or inform other groups.

1. For the limit $\lim_{x \rightarrow c} f(x) = L$ below and $\epsilon = 0.25$, use graphs and algebra to approximate the largest value of δ such that $x \in (c - \delta, c) \cup (c, c + \delta)$, then $f(x) \in (L - \epsilon, L + \epsilon)$. Explain your reasoning clearly and put a box around your final answer for δ .

$$\lim_{x \rightarrow 2} x^3 = 8$$

2. Solve the inequality below by using a labeled number line. Write your final answer in interval notation and put a box around it.

$$\frac{x^2 - 4x + 3}{x^2 - 3x + 2} \geq 0$$