Quiz (10 points)

The following quiz is due Tuesday, January 27, 2015 at the beginning of your drill. You may use your brain, notes, book, other humans and any pet of your choice. **Your solutions must be *on a separate sheet of paper, in order, stapled, de-fringed, and legible* with *your name on the top right corner on the first page.*** If you **fail to meet any of these requirements** you **WILL RECEIVE A ZERO.** Each question is worth one point and is all or nothing.

Evaluate Analytically

1. $\lim_{x\to -3} \frac{x+9}{x^2\sqrt[3]{5x+7}}$

2. $\lim_{t\to 5} \frac{\frac{1}{5}-\frac{5}{t^2}}{t-5}$

3. $\lim_{x\to 0} x\cos\left(\frac{1}{x}\right)$

4. $\lim_{h\to 4} \frac{h^2-h-12}{h^2-2h-8}$

5. $\lim_{x\to 2} \frac{2x^2-8}{x+2}$

6. $\lim_{x\to 6} \frac{x^2+3x-10}{x-6}$

7. $\lim_{x\to 6} \frac{\sqrt{x-6}+2}{\sqrt{x+3}-6}$

8. $\lim_{t\to 2} \frac{4t^4-64}{t-2}$

9. $\lim_{x\to 0} \frac{a-\sqrt{a^2-x^2}}{x^2}$

10. Use the definition of vertical asymptotes to find all possible asymptotes for the following function.

$$f(x)=\frac{2x^2+3x-5}{x^2-7x+6}$$