Math 220 (section AD?) **Quiz 3** **Spring 2015**

Name _____

- 20 minutes
- No calculators
- Show sufficient work
- Do not use derivatives

1. (2 points) Evaluate $\csc(2\arccos(4/5))$.

2. (1 point) Which one of the following equations must hold in order for a function w to be continuous at a number p ?

   (a) $\lim_{x\to 0} w(x) = w(p)$

   (b) $\lim_{x\to 0} w(x) = 0$

   (c) $\lim_{x\to 0} w(x) = p$

   (d) $\lim_{x\to p} w(x) = w(p)$

   (e) $\lim_{x\to p} w(x) = 0$

   (f) $\lim_{x\to p} w(x) = p$

   (g) $\lim_{x\to \infty} w(x) = w(p)$

   (h) $\lim_{x\to \infty} w(x) = 0$

   (i) $\lim_{x\to \infty} w(x) = p$

3. (2 points each) Evaluate the following limits. An answer of 'does not exist' is not sufficient. For infinite limits you must state if it is ∞ or $-\infty$.

(a) $\lim_{x \to 4^-} \dfrac{\sqrt[3]{x-12}}{x-4}$

(b) $\lim_{x \to 0} \left(\dfrac{1}{2x} - \dfrac{3}{x^2+6x} \right)$

4. (3 points) Find all horizontal asymptotes on the graph of $f(x) = \dfrac{16 + 15e^{2x}}{3e^{2x} - 8}$.