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**Math 2010, Winter 2007, Quiz 3**
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1. Suppose that $\lim_{x\to 3} f(x) = 5$ and $\lim_{x\to 3} g(x) = 4$.
   (a) Find $\lim_{x\to 3} 3f(x) - 2g(x)$.
   (b) Find $\lim_{x\to 3} \dfrac{f(x)-5}{g(x)}$.
2. Give examples to show that it is possible to have $\lim_{x\to 3} f(x) = 0 = \lim_{x\to 3} g(x)$ and
   (a) $\lim_{x\to 3} \dfrac{f(x)}{g(x)} = 3$.
   (b) $\lim_{x\to 3} \dfrac{f(x)}{g(x)} = 0$.
   (c) $\lim_{x\to 3} \dfrac{f(x)}{g(x)} = \infty$.