Show all work, including mental steps, in a clearly organized way that speaks for itself. Use proper mathematical notation, identifying expressions by their proper symbols (introducing them if necessary) and using equal signs or arrows when appropriate. 

**Box** final short answers.

1. \( g(x,y) = \frac{5x}{2x+3y} \). Evaluate (and simplify) \( g_x(x,y) \) and \( g_y(x,y) \).

2. \( P(L,K) = 1.01 L^{\frac{3}{4}} K^{\frac{1}{4}} \).
   a) Evaluate (and simplify) \( \frac{\partial P}{\partial L} (1,16) \) and \( \frac{\partial P}{\partial K} (1,16) \).
   b) Based on your numerical values for part a), is a unit increase in \( L \) or \( K \) more effective in increasing the value of \( P \) when \( L=1 \) and \( K=16 \)? Explain.