

**Math 163A section 01 (Barsamian) Group Work for Thursday, March 10, 2005**

A student turned in this solution to a homework problem. Fill in all the missing symbols and justifications for the steps. What was the homework problem?

$$\begin{aligned} & \frac{(8x^2 - 5x(y+h)^3) - (8x^2 - 5xy^3)}{h} \\ & \frac{-5x((y+h)^3 - y^3)}{h} \\ & \frac{-5x(y^3 + 3y^2h + 3yh^2 + h^3 - y^3)}{h} \\ & \frac{-5x(3y^2h + 3yh^2 + h^3)}{h} \\ & \frac{-5xh(3y^2 + 3yh + h^2)}{h} \\ & -5x(3y^2 + 3yh + h^2) \\ & -5x(3y^2 + 3y(0) + (0)^2) \\ & -15xy^2 \end{aligned}$$

The same student turned in this solution to another problem. Fill in all the missing symbols and justifications for the steps. What was the homework problem?

$$\begin{aligned} & 8x^2 - 5xy^3 \\ & 8 \frac{\partial}{\partial x} x^2 - 5y^3 \frac{\partial}{\partial x} x \\ & 8(2x) - 5y^3(1) \\ & 16x - 5y^3 \end{aligned}$$