When you use substitution or integration by parts, you change the given integral problem to another integral problem. Sometimes, you might need to use substitution or integration by parts again to change the new integral problem to another integral problem.

Ex: $\int_0^1 x^3 e^{x^2} dx$

First, we will use the substitution $u = x^2$. Then the integral problem will become essentially finding $\int_0^1 ue^u du$. You can rename u to x to save the name u for other purposes (optional). Then use integration by parts like we did last time.

Work on the worksheet.