

## Definite Integrals Study Group Activity

(Groups of 3 or 4 people)

**Purpose of activity:** Gain a deeper understanding of the topic by solving a problem on your own and then teaching it to your peers.

**Due Date:** End of Thanksgiving Break (25<sup>th</sup> at midnight)

**Individual Portion:** Everybody in the group should choose ONE of the problems below. Solve your problem on your own before you meet with your group.

1. Find  $\int_1^4 x^2(x^3 + 1)^2 dx$
2. Find  $\int_{\frac{\pi}{2}}^{\frac{3\pi}{2}} x \cos(x^2) dx$
3. Find  $\int_0^{\sqrt{\ln(3)}} x e^{x^2} dx$
4. Find  $\int_1^{e^2} \frac{3x^2+2}{x^3+2x} dx$

**Group Portion:** Take turns teaching your problem to the rest of the group. Use a whiteboard to clearly show each step to your groupmates. Record your teaching using a phone or camera.

**Assessment:** Upload your video to Blackboard.