W01 Stepwise

01

> ✎ **Shells volume - offset graph, y-axis**
>
> Consider the region in the first quadrant bounded by the lines $x = 0$, $x = 2$, $y = 0$, and the curve $y = \frac{1}{\sqrt{x^2+1}}$.
> Revolve this about the y-axis.
>
> Find the volume of the resulting solid.

✐ **Integration by parts - A and E**

Compute the integral:

$$\int (2x + 9)e^x \, dx$$

✍ **Integration by parts - A and T**

Compute the integral:

$$\int x^2 \sin x \, dx$$