1.) (5 pts.) Evaluate the integral using the Fundamental Theorem of Calculus: $\int_{-1}^{2} e^x \, dx$.

Antiderivative of $e^x$ : $e^x$

So: $\int_{-1}^{2} e^x \, dx = \left[ e^x \right]_{-1}^{2} = e^2 - e^{-1}$

2.) (5 pts.) For the function $g$ graphed below, estimate the value of $\int_{0}^{8} g(x) \, dx$ by evaluating a trapezoid sum with two equal subintervals.

This case gives us a **rectangle** and **triangle**, rather than **trapezoids**, when we connect the $y$-values at the endpoints.

Area = $(8)(\omega) + \frac{1}{2} (b)(h)$

= $(8)(4) + \frac{1}{2} (4)(6)$

= $24 + 12$

= $36$