

$$\int_{-4}^0 x^2 + 8x + 12$$

$$\int_{-4}^0 \frac{x^3}{3} + \frac{8x^2}{2} + 12x$$

$$\frac{[0]^3}{3} + \frac{8[0]^2}{2} + 12(0) \left[\frac{[-4]^3}{3} + \frac{8[-4]^2}{2} + 12(-4) \right]$$

$$0 + 0 + 0 \left[\frac{-64}{3} + 64 + (-48) \right] = 5.33$$

$$\int_{-1}^5 x^2 - 4x - 5 \frac{d}{dx}$$

$$\int_{-1}^5 \frac{x^3}{3} - \frac{4x^2}{2} - 5x$$

$$\int_{-1}^5 \frac{x^3}{3} - 2x^2 - 5x + 6$$

$$\frac{(5)^3}{3} - 2(5)^2 - 5(5) - \left[\frac{(-1)^3}{3} - 2(-1)^2 - 5(-1) \right]$$

$$\frac{125}{3} - 25 - \left[\frac{-1}{3} - 2 \right]$$

$$\frac{125}{3} - 25 - \left[\frac{-1}{3} - 2 \right] = \frac{-100}{3} + \frac{10}{3}$$

$$= \frac{-110}{3} = 36.66$$

$$\int_{-4}^5 -x + 2$$

$$\int_{-4}^5 \frac{-x^2}{2} + 2x$$

$$\frac{-(5)^2}{2} + 2(5) - \left[\frac{-(-4)^2}{2} + 2(-4) \right]$$

$$\frac{-25}{2} + 10 - \left[\frac{-16}{2} + (-8) \right]$$

$$\frac{-25}{2} + 10 - \left[\frac{-16}{2} + (-8) \right] = \frac{13}{2}$$