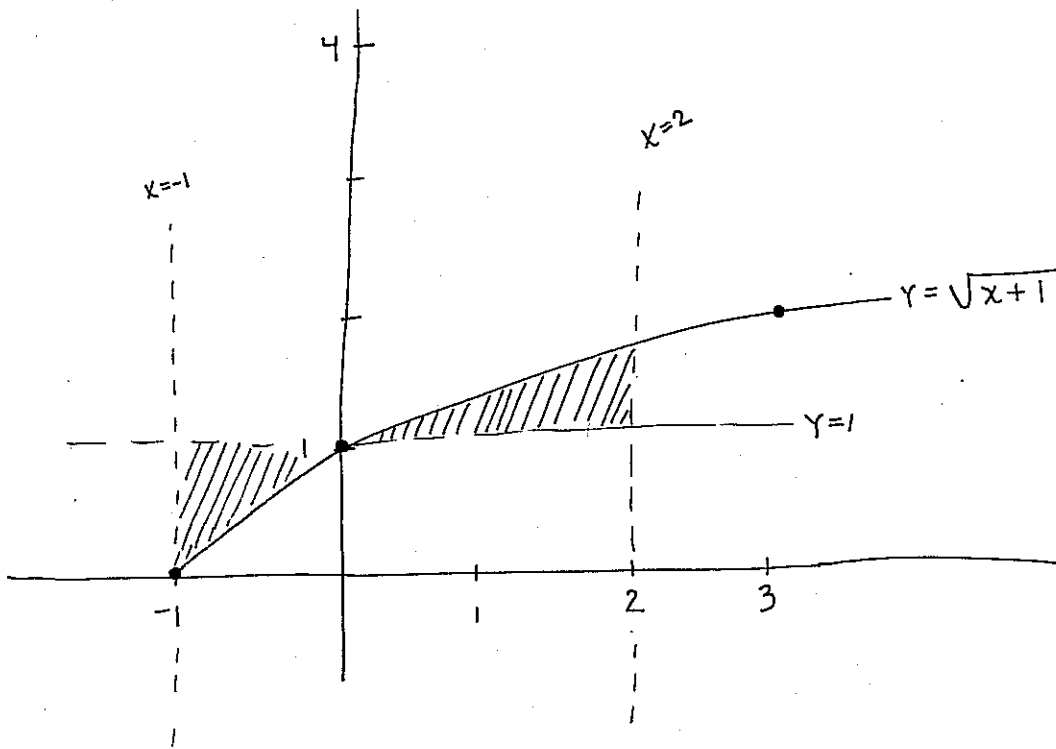


QUIZ 6
SOLUTIONS
NYA ELECTRONICS
WINTER 2011



$$\text{AREA} = \int_{-1}^0 |-\sqrt{x+1}| dx + \int_0^2 (\sqrt{x+1} - 1) dx$$

$$= \left[x - \frac{2}{3}(x+1)^{3/2} \right]_{-1}^0 + \left[\frac{2}{3}(x+1)^{3/2} - x \right]_0^2$$

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

$$= \left(\frac{1}{3} \right) + \left(2\sqrt{3} - \frac{8}{3} \right)$$

$$= \boxed{2\sqrt{3} - \frac{7}{3}} \quad (\approx 1.13)$$