

**Class Exercise 7**

1. Evaluate

$$\int_C \frac{x^2}{y^{4/3}} ds,$$

where  $C$  is the curve  $\gamma(t) = (t^2, t^3)$ ,  $t \in [1, 2]$ .

2. Find the length of the arc of the parabola  $y = x^2 - 3$  over  $[0, 1]$ .