7.4 Arc Length

EXAMPLES  Find the length of the curve.

1. \[ y = 2 - 3x, \quad -2 \leq x \leq 1 \] (first use the arc length formula and second use that the curve is a line)
2. \[ y = \frac{1}{3} \sqrt{x(x-3)}, \ 1 \leq x \leq 9 \]

3. \[ y = \frac{x^5}{6} + \frac{1}{10x^3}, \ 1 \leq x \leq 2 \]