1. Evaluate the following indefinite integrals:

   a. \( \int \frac{3}{t} \, dt \)

   b. \( \int e^{-2.34y} \, dy \)

   c. \( \int 7 \ln x \, dx \)

2. The rate of change of demand for stereo shelf units at Audio Dimensions is given by \( D'(p) = -6637.226(0.984^p) \) shelf units per dollar when the price is \( p \) dollars for one stereo shelf unit. When the price is $225, the demand will be 18 shelf units. Recover the demand model.
Math 2123 - Math Center Worksheet
Section 5.6

1. Evaluate the following definite integrals:

   a. \( \int_{-4}^{2} \frac{9}{t} \, dt \)

   b. \( \int_{0}^{10} 74.9(0.86^y) \, dy \)

2. The rate of change of passenger traffic at a small airport between 1970 and 2003 is given by \( f(x) = 1.407x^2 - 46.289x + 312.623 \) thousand passengers per year, where \( x \) is the number of years after 1970.

   Evaluate and interpret \( \int_{2}^{8} f(x) \, dx \)

3. Find the area of the region bounded by \( f(x) = 2.7 \frac{9.8}{\sqrt{x}} \) and the x-axis on \([8, 26]\).
Find the area between $f(x) = x + 3.5$ and $g(x) = 2.6(1.17^x)$ on [-6, 13].