1. Use translation to graph $y = \ln(x - 2) - 1$.

2. Compute the derivatives of the following functions:

   (a) $f(x) = x^2 \ln x$

   (b) $g(x) = \ln\left(x\sqrt{x^2 + 5}\right)$

   (c) $h(x) = \ln(\ln x)$

3. Compute the following definite and indefinite integrals.

   (a) $\displaystyle\int_0^2 \frac{dx}{2x + 7}$

   (b) $\displaystyle\int_1^e \frac{3x^2 + 2x + 1}{x}\, dx$

   (c) $\displaystyle\int \frac{(\ln x)^3}{2x}\, dx$

   (d) $\displaystyle\int \frac{\sin x}{4 + \cos x}\, dx$

   (e) $\displaystyle\int \frac{e^{7x}}{e^{7x} + 3}\, dx$

   (f) $\displaystyle\int_0^4 \frac{\sqrt{x} + 2}{\sqrt{x}\,(\sqrt{x} + 1)}$

4. Sketch the graph of the curve $y = \dfrac{e^x - 1}{e^x + 1}$, indicating any horizontal and vertical asymptotes, local extrema (if any), inflection points (if any), and intervals of increase/decrease and of concavity.