1.

  (a) §2.4 : 49.

  (b) §2.4 : 50.

  (c) §2.4 : 74.

2. §2.5 : 51.

3. Find any and all vertical and horizontal asymptotes of the following functions. Additionally, be sure to describe the behavior at the vertical asymptotes, i.e. evaluate the limits at those asymptotes.

  (a) $\dfrac{x^2 - 3x + 2}{x^2 - 2x}$

  (b) $\dfrac{3}{2}\left(\dfrac{x}{x-1}\right)^{2/3}$

4. For what value(s) of b is the function g continuous on $(-\infty, \infty)$?

$$g(x) = \begin{cases} -4x + 1 & x \le b \\ x^2 - 2x + 2 & x > b \end{cases}$$