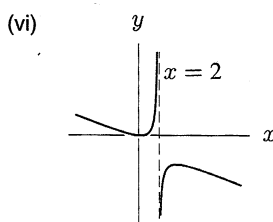
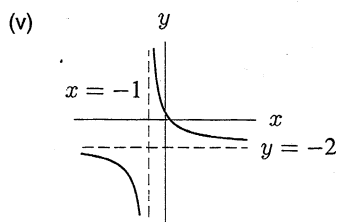
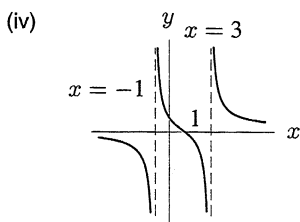
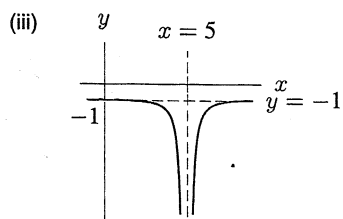
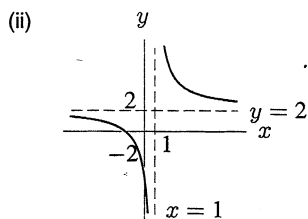
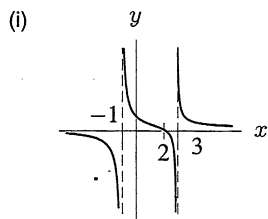


7. Without using a calculator, match the functions in (a) – (f) with their graphs in (i) – (vi) by finding the zeros, asymptotes, and end behavior for each function.

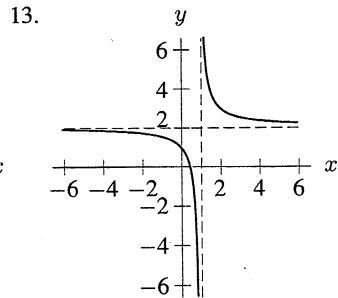
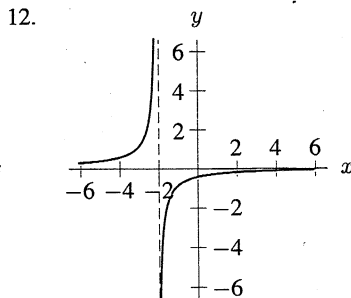
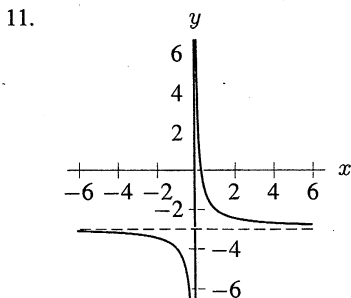
(a) $f(x) = \frac{-1}{x^2 - 10x + 25} - 1$ (b) $f(x) = \frac{x - 2}{(x + 1)(x - 3)}$ (c) $f(x) = \frac{2x + 4}{x - 1}$

(d) $f(x) = \frac{1}{x + 1} + \frac{1}{x - 3}$ (e) $f(x) = \frac{1 - x^2}{x - 2}$ (f) $f(x) = \frac{1 - 4x}{2x + 2}$



Problems 11–13 each show a graph of a translation of the function $y = 1/x$. In each problem

- (a) Find a possible formula that represents the graph.
 (b) Write the formula from part (a) as the ratio of two linear polynomials.
 (c) Find the coordinates of the intercepts of the graph.



Problems 14–16 each show a graph of a translation of $y = 1/x^2$. In each case:

- (a) Find a formula that represents the graph.
 (b) Write the formula from part (a) as the ratio of two polynomials.
 (c) Find the coordinates of any intercepts of the graph.

