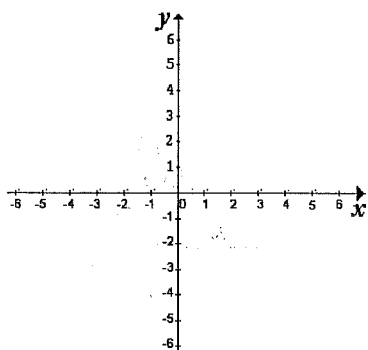


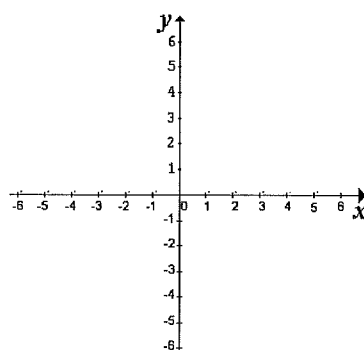
EXERCISES – Harder Graphs

Find any horizontal and vertical asymptotes and sketch the graphs of the following functions showing any intercepts and turning points:-

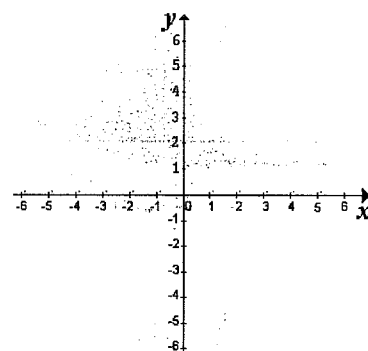
(a) $y = \frac{x}{x+1}$



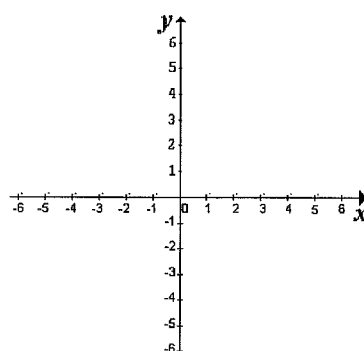
(b) $y = \frac{x}{x-4} + 4$



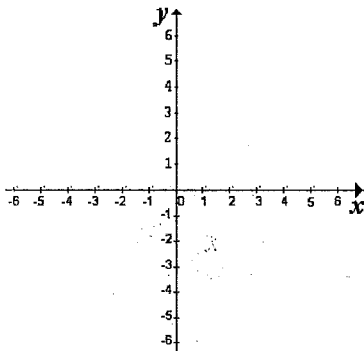
(c) $y = \frac{x^2 - 1}{x^2 + 1}$



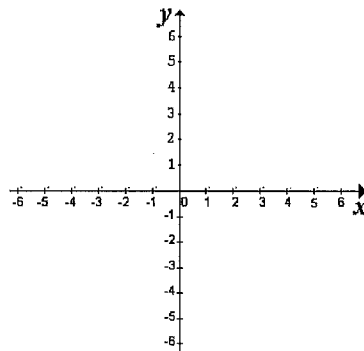
(d) $y = \frac{x^2 + 1}{x^2 - 1}$



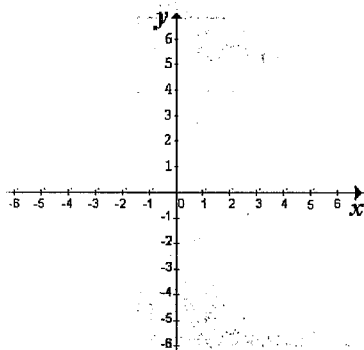
(e) $y = \frac{x}{x^2 - 4}$



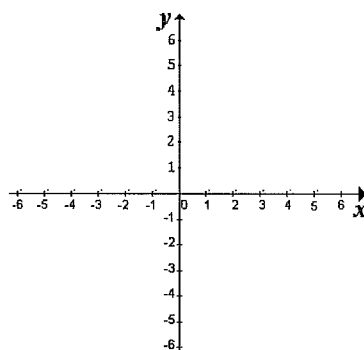
(f) $y = \frac{4x + 4}{x^2}$



(g) $y = x + \frac{1}{x}$

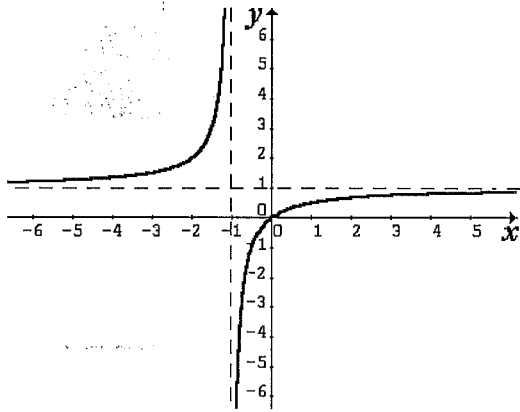


(h) $y = \frac{x^2 + 1}{x^2}$

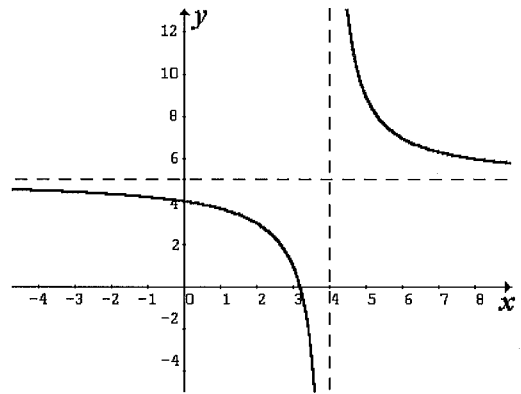


(Answers)

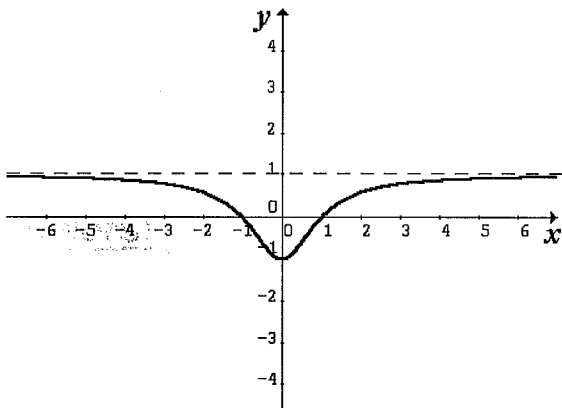
(a)



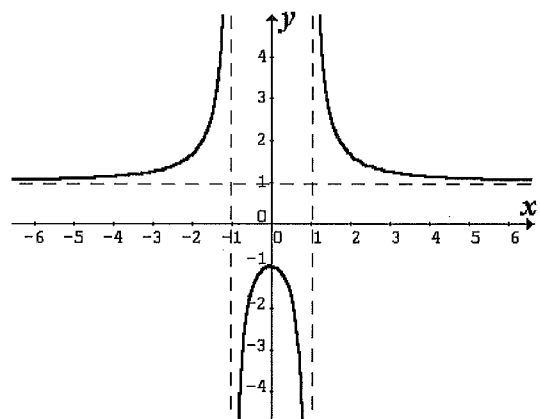
(b)



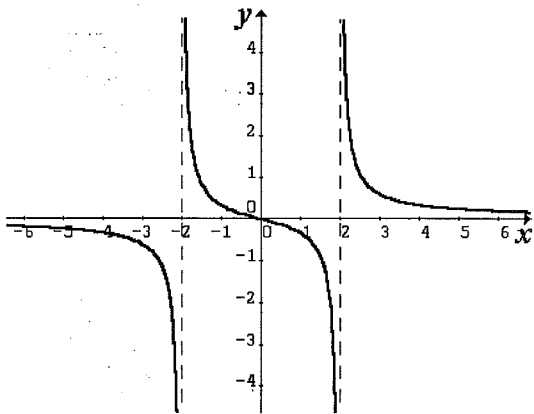
(c)



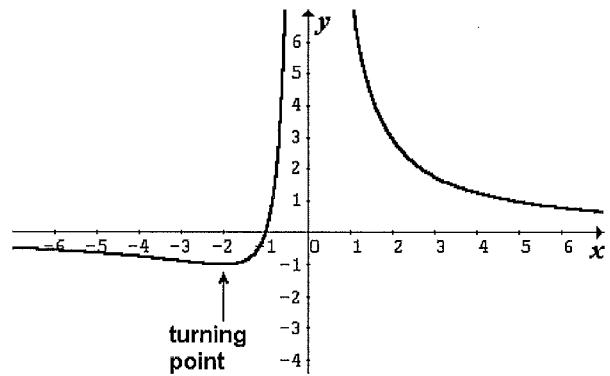
(d)



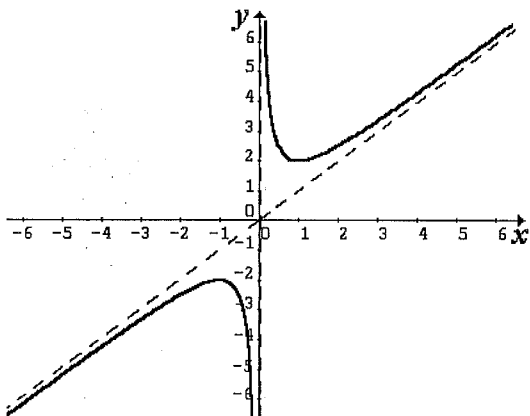
(e)



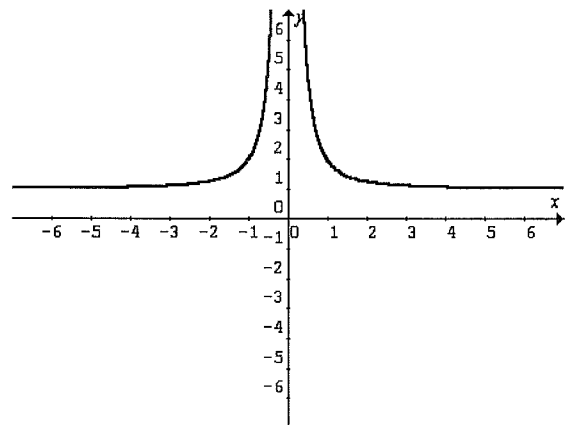
(f)



(g)



(h)



Harder Examples:

(i) $y = x^2 - \frac{2}{x}$

(j) $y = 2x - \frac{1}{x^2}$

