#3 Sec. 2.7

p.105 # 1, 7, 9, 11–15, 17, 19, 23, 25, 27

(1) $y=1 \quad y=2$

(7) $\lim_{x\to\infty} \frac{x}{x+9} = 1$

(9) $\lim_{x\to\infty} \frac{3x^2+20x}{2x^4+3x^3-29} = 0$

(11) $\lim_{x\to\infty} \frac{7x-9}{4x+3} = \frac{7}{4}$

(12) $\lim_{x\to\infty} \frac{9x^2-2}{6-29x} = -\infty$

(13) $\lim_{x\to-\infty} \frac{7x^2-9}{4x+3} = -\infty$

(14) $\lim_{x\to-\infty} \frac{5x-9}{4x^3+2x+7} = 0$

(15) $\lim_{x\to-\infty} \frac{3x^3-10}{x+4} = \infty$

(17) $f(x) = \frac{2x^2-3x}{8x^2+8}$ HA $y = \frac{1}{4}$

(19) $f(x) = \frac{\sqrt{36x^2+7}}{9x+4}$ HA $y = \frac{6}{9}$

(23) $\lim_{x\to\infty} \frac{\sqrt{9x^4+3x+2}}{4x^3+1} = 0$

(25) $\lim_{x\to-\infty} \frac{8x^2+7x^{\frac{1}{3}}}{\sqrt{16x^4+6}} = 2$

(27) $\lim_{t\to\infty} \frac{t^{\frac{4}{3}}+t^{\frac{1}{3}}}{(4t^{2/3}+1)^2} = \frac{1}{4}$