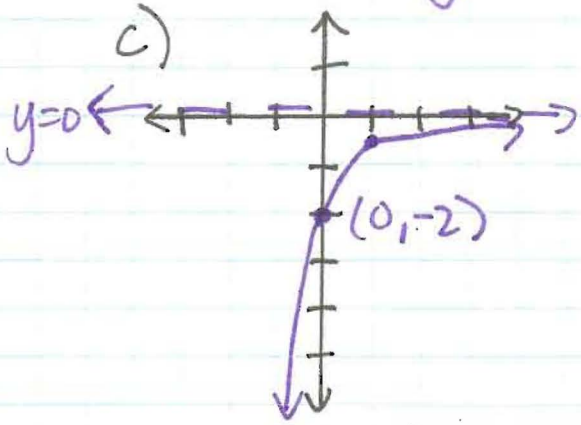
Answers to Ch. 7 Practice Test

① 4 ② -3 ③ 10 ④ 0

⑤ a) $y=0$, $(0,-2)$

b) D: $\mathbb{R}$ R: $y<0$

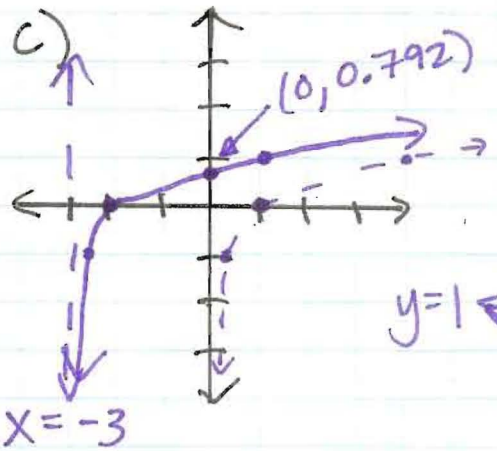
c)



⑥ a) $x=-3$

b) D: $x>-3$ R: $\mathbb{R}$

c)

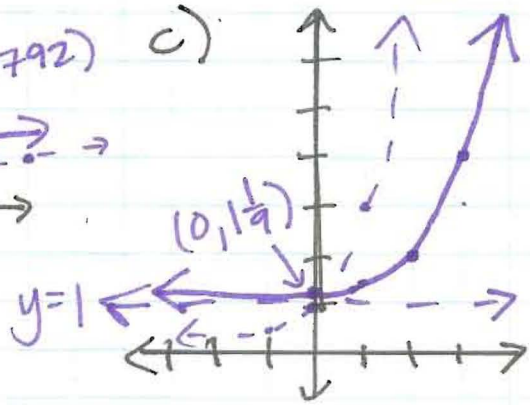


y-int: $(0, \log_4 3)$ $\approx (0, 0.792)$

⑦ a) $y=1$, $(0, 1\frac{1}{9})$

b) D: $\mathbb{R}$ R: $y>1$

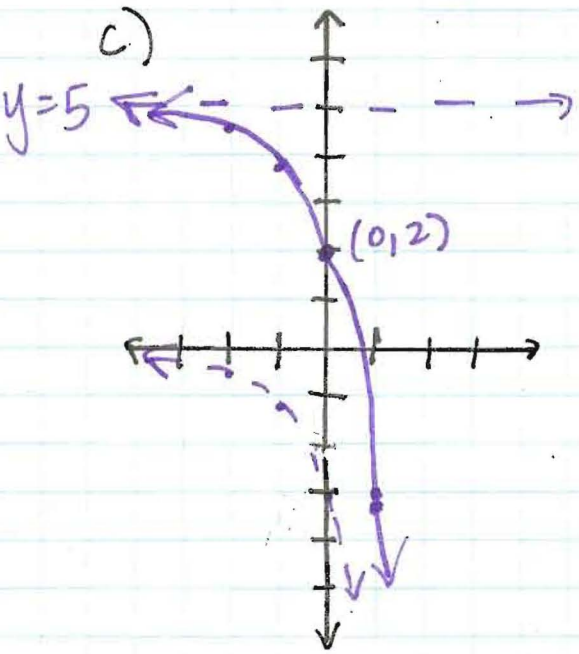
c)



⑧ a) $y=5$, $(0,2)$

b) D: $\mathbb{R}$ R: $y<5$

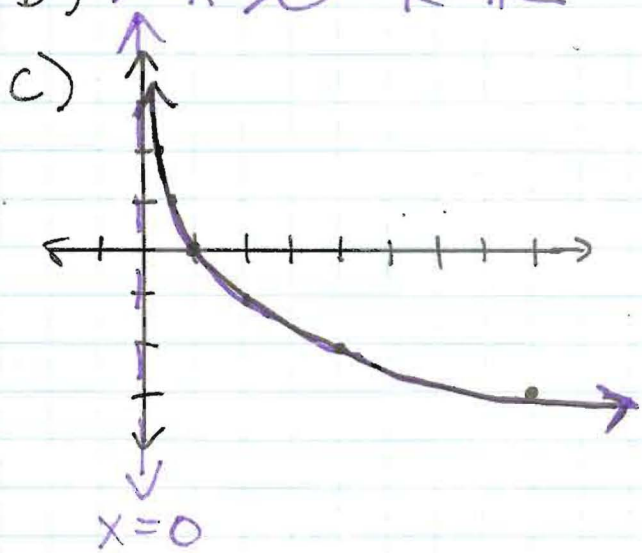
c)



⑨ a) $x=0$, no y-intercept

b) D: $x>0$ R: $\mathbb{R}$

c)



(10) $\$2470.00$

(11) $\$2470.54$

(12) $6e$

(13) e^{2x+6}

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

(15) $\frac{10000}{e^{8x}}$

(16) $\ln 6 + \ln x - \ln 5$

(17) $\log 3 + 2\log x + \log y$

(18) $\log_4 \frac{1}{27}$

(19) $\ln 5x^4$

(20) $y = 6^x$ or $f^{-1}(x) = 6^x$

(21) $y = e^x - 2$ or $f^{-1}(x) = e^x - 2$

(22) $x = -\frac{7}{5} = -1.4$

(23) $x = -\ln\frac{13}{3} \approx -1.466$

(24) $x = \frac{\log 30}{2\log 7} = \frac{\log 30}{\log 49} \approx 0.874$

(25) $x = \frac{\ln 3}{\ln 6 - \ln 3} = \frac{\ln 3}{\ln 2} = \frac{\log 3}{\log 2} \approx 1.585$

(26) $x = 2187$

(27) No solution

(28) $x = \frac{e^5}{3} \approx 49.471$

(29) $x = 7$

(30) $x = 2$