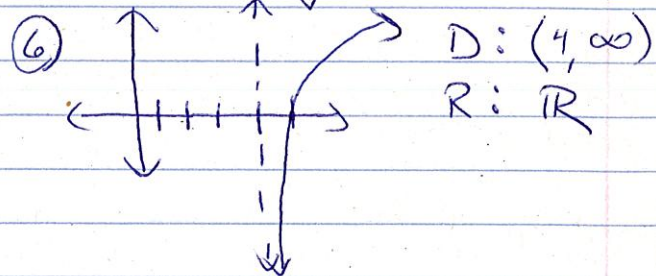
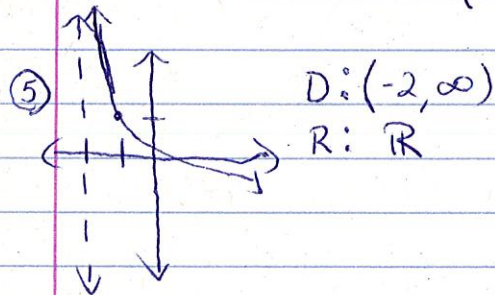
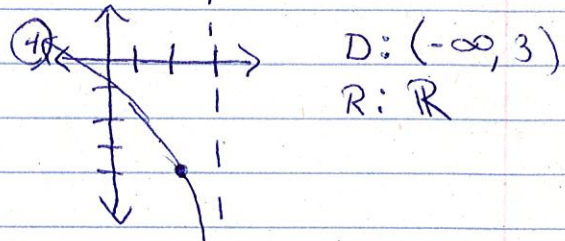
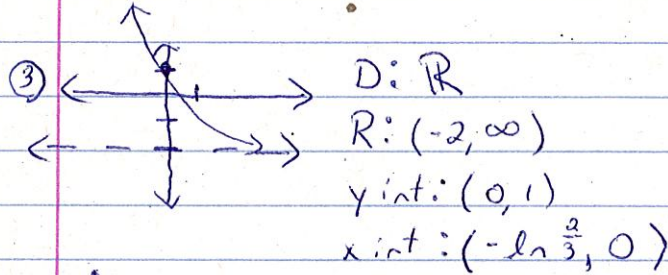
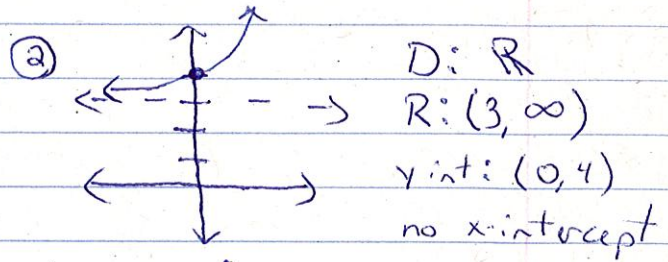
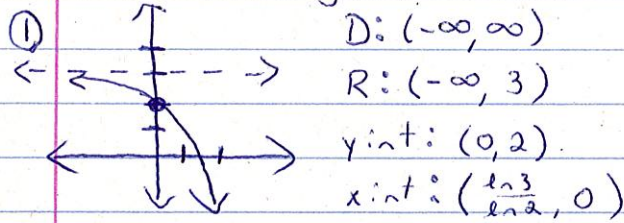


# Pre-Cal Day 3 Review



⑦  $x-3$     ⑧  $x-1$     ⑨ DNE    ⑩  $0$

⑪  $\log\left(\frac{ac}{b}\right)$     ⑫  $\ln\left(\frac{4^2}{2}\right) = \ln 8$     ⑬  $\ln 2$     ⑭  $\log(xy)$

⑮  $y = e^{2x+4}$     ⑯  $y = 2xe^x + 1$

⑰  $e^{\ln x^2} = e^1$   
 $x^2 = e$   
 $x = \pm\sqrt{e}$   
 check solns.  
 $x = \sqrt{e}$

⑱  $\ln 5^{x-3} = \ln 10$   
 $(x-3)\ln 5 = \ln 10$   
 $x-3 = \frac{\ln 10}{\ln 5}$   
 $x = \frac{\ln 10}{\ln 5} + 3$

⑲  $e^{\ln(\ln x)} = e^1$   
 $\ln x = e$   
 $e^{\ln x} = e^e$   
 $x = e^e$

⑳  $\ln x^2 = \ln[2(3x-4)]$   
 $x^2 = 6x-8$   
 $x^2 - 6x + 8 = 0$   
 $(x-2)(x-4) = 0$   
 $x = 2 \text{ or } 4$

⑳  $e^{4x} = 1$   
 $\ln e^{4x} = \ln 1$   
 $4x = 0$   
 $x = 0$

㉑  $e^x = -5$   
 $\ln e^x = \ln(-5)$   
 $x = \ln(-5)$   
 No soln

㉒  $e^x(x^2+4x+3) = 0$   
 $e^x(x+3)(x+1) = 0$   
 $e^x = 0$      $x+3 = 0$      $x+1 = 0$   
 DNE     $x = -3$      $x = -1$

$$\textcircled{1} \quad 0 = -2^x + 3$$

$$2^x = 3$$

$$\ln 2^x = \ln 3$$

$$x \ln 2 = \ln 3$$

$$x = \frac{\ln 3}{\ln 2}$$

$$\ln 2$$

$$x \approx 1.585$$

$$\textcircled{3} \quad 0 = 3e^{-x} - 2$$

$$2 = 3e^{-x}$$

$$\frac{2}{3} = e^{-x}$$

$$\ln \frac{2}{3} = -x$$

$$x \approx -0.405$$

$$\textcircled{4} \quad y = 2 \ln [-(x-3)] - 4$$

$$\textcircled{13} \quad \ln \left( \frac{2a/b}{a/b} \right) = \ln \left( \frac{2a}{b} \cdot \frac{b}{a} \right)$$

$$\textcircled{14} \quad \log \frac{(xy)^4}{(xy)^3} = \log(xy)$$