

$$17) \log_6 (2x-3) = \log_6 12 - \log_6 3$$

$$\log_6 (2x-3) = \log_6 \frac{12}{3}$$

$$2x-3 = 4$$

$$2x = 4+3$$

$$\boxed{x = \frac{7}{2}}$$

22-141 50 SHEETS  
22-142 100 SHEETS  
22-144 200 SHEETS



$$19) 2 \log_3 x = 3 \log_3 5$$

$$\log_3 x = \frac{3}{2} \log_3 5$$

$$\log_3 x = \log_3 5^{\frac{3}{2}}$$

$$x = 5^{\frac{3}{2}}$$

$$25) \log_2 (x+7) + \log_2 x = 3$$

$$\log_2 x(x+7) = 3$$

$$\log_2 x^2 + 7x = 3$$

$$x^2 + 7x = 2^3$$

$$x^2 + 7x - 8 = 0$$

$$\boxed{(x-1)(x+8)}$$

$$\boxed{x=1; x=-8}$$

$$31) \ln x = 1 - \ln (x+2)$$

$$\ln x + \ln (x+2) = 1$$

$$\ln x(x+2) = 1$$

$$\ln x^2 + 2x = 1$$

$$x^2 + 2x = e^1$$

$$x^2 + 2x - e = 0$$

$$\frac{-2 \pm \sqrt{2^2 - 4(1)(-e)}}{2}$$

$$: \frac{-2 \pm \sqrt{4+4e}}{2}$$

$$; \frac{-2 \pm \sqrt{4(1+e)}}{2}; -1 \pm \sqrt{1+e}$$

$$\boxed{-1 \pm \sqrt{1+e}}$$