A2: Solving WKST 3

I. Solve the equation. Round to 3 decimals.

1. $6\ln(-x)+3=21$	2. $4^{2x-3}=12$	3. $2-\log_2(x+1)=4$
4. $\log_3(x^2-3)=\log_3 2+\log_3 x$	5. $\left(\frac{1}{125}\right)^{x+2}=25^{3-x}$	6. $3^{x+5}=7$
7. $\log_{81} x=\frac{3}{4}$	8. $4^{1/x}=16$	9. $\log(x-7)=3$
10. $\log_9(x^2-4x)=\log_9(3x-10)$	11. $13\log x-6=6$	12. $\log_6 x+\log_6(x+1)=1$
13. $3\log_5(4-x)+1=7$	14. $\ln\sqrt[4]{x-1}=1$	15. $\log_4(2x+2)-\log_4(x-2)=1$
16. $2(3)^{x-4}+5=4$	17. $\log_2 x^3=\log_2 x$	18. $\log_{12}(x^2-7)=\log_{12}(x+5)$

II. Find the inverse function.

19. $f(x)=2^x+6$	20. $g(x)=3e^{x-4}-7$
21. $h(x)=2\log_9 x$	22. $m(x)=-\log_2(x-4)+1$

ANSWERS

1. -20.086	2. 2.396	3. -3/4	4. 3	5. -12
6. -3.229	7. 27	8. 1/2	9. 1007	10. 5
11. 8.377	12. 2	13. -21	14. 55.598	15. 5
16. no solution	17. 1	18. -3, 4		

19. $f^{-1}(x)=\log_2(x-6)$	20. $g^{-1}(x)=\ln\left(\frac{x+7}{3}\right)+4$
21. $h^{-1}(x)=9^{x/2}$	22. $m^{-1}(x)=2^{1-x}+4$