

A2: Solving WKST 2

I. Solve the exponential equation. Round to 3 decimals.

1. $5^{x+3} = 7$	2. $2^{5x-3} = 12$	3. $e^{2x} + 5 = 10$	4. $\frac{1}{3^x} = 5$
5. $10^{x+3} + 6 = 25$	6. $7^x + 10 = 5$	7. $3(10)^{-x} - 4 = 6$	8. $\frac{e^{x+2}}{3} + 5 = 6$

II. Solve the logarithmic equation. Round to 3 decimals.

9. $\log_4 x = -1$	10. $5 \ln x = 35$	11. $\log_2(2x - 7) = \log_2(3x - 9)$
12. $\log_5(5x + 9) = \log_5(6x)$	13. $\ln(x + 3) + \ln x = 1$	14. $\log_4(-x) + \log_4(x + 10) = 2$
15. $4 \ln(-x) + 3 = 21$	16. $\log x - \log(x + 1) = 1$	17. $\log_2(x - 4) = 6$
18. $\log_8(5 - 12x) = \log_8(6x - 1)$	19. $\frac{1}{3} \log_5 12x = 2$	20. $2 \log x + \log 7 = \log 14x$

ANSWERS

1. -1.791	2. 1.317	3. 0.804	4. -1.465	5. -1.721
6. no solution	7. -0.523	8. -0.901	9. $\frac{1}{4}$	10. 1096.633
11. no solution	12. 9	13. 0.729	14. -8, -2	15. -90.017
16. no solution	17. 68	18. 1/3	19. 1302.083	20. 2