

## ADVANCED EXPONENTIAL & LOGARITHMIC EQUATIONS

Solve the following equations.

1.  $4^{3x-2} = 5^{2x+1}$

2.  $6^{x+2} = e^{2x-1}$

3.  $10^{x-1} = e^{x+4}$

4.  $10^{3x+4} = 100^{x-5}$

5.  $16 \cdot 4^x = 18^{x-1}$

6.  $e^{2x} = 4e^x + 5$

7.  $4^x - 5 \cdot 2^x = -6$

8.  $\log_4(x-5) = \log_3(x-12)$

9.  $\log_5(x+1) = \ln(x-2)$

10.  $\log(2x-1) = \ln(x+5)$