

## SM3 HANDOUT 5-6 (Solving Log & Exponential Equations)

$$9^{2x} = 27^{x-1}$$

$$8^{x+2} = 4^{x-2}$$

$$5^x = 7^{2x-1}$$

Solve

$$5^{x+2} = 4^{x-2}$$

$$3^{2x-1} + 5 = 7$$

Solve

$$\log(x - 5) = \log(2x + 3)$$

Solve:

$$\log_2 5^x = 4$$

$$\log_3 4^{5x} = 6$$

$$\ln 5^{x+2} + \ln 5^2 = 2$$

$$\log_2 4x + \log_2 3 = 6$$

$$3 + \log_4 3^{2x-1} = 6$$

$$\log_4 (5x - 1) = 3$$