W5 – 7.4 – Solving Logarithmic Equations
MHF4U

1) Find the roots of each equation

a) $2 = \log(x + 25)$ **b)** $1 - \log(w - 7) = 0$ **c)** $6 - 3\log(2n) = 0$

2) Solve

a) $5 = \log_2(2x - 10)$ **b)** $9 = \log_5(x + 100) + 6$ **c)** $\log_3(n^2 - 3n + 5) = 2$

3) Solve. Make sure to reject any extraneous roots.

a) $\log x + \log(x - 4) = 1$ **b)** $\log x^3 - \log 2 = \log(2x^2)$

c) $\log(v-1) = 2 + \log(v-16)$

d) $\log(k+2) + \log(k-1) = 1$

4) Solve. Check for extraneous roots.

a) $\log\sqrt{x^2-3x} = \frac{1}{2}$

b) $\log\sqrt{x^2+48x} = 1$

5) Solve. Check for extraneous roots.

a) $\log_2(x+5) - \log_2(2x) = 8$

b) $\log(2k+4) = 1 + \log k$