

Name: \_\_\_\_\_

MATH 101

Fall 2021

HW 18: Due 11/23

*“There’s two positions in snowboarding:  
one is looking cool and the other is  
dead!”*

*–Eddie Izzard*

**Problem 1.** (10pt) Solve the equation  $2(4^{2x}) = 8$  using logarithms.

**Problem 2.** (10pt) Solve the equation  $6(9^{x-1}) = 5$  using logarithms.

**Problem 3.** (10pt) Solve the equation  $\log_2(x + 5) = 4$ .

**Problem 4.** (10pt) Solve the equation  $\log(x + 2) + \log(x + 5) = 1$ . Be sure to check that all your solutions are valid.