Classwork 6
Intermediate Algebra MTH 35
Topic: Algebraic and Rational Expressions II

Name: _____

1. Find the zeros and the domain of the following rational expressions.

  a. $\dfrac{2x + 1}{5 - 4x}$

  b. $\dfrac{y^2 + 1}{y^3 - 3y^2}$

  c. $\dfrac{2z - 7}{z^2 - z - 20}$

2. Simplify the following expressions.

  a. $2 - \dfrac{x}{x + 3}$

  b. $\dfrac{1}{x + 5} - \dfrac{x}{x + 3}$

  c. $u + 1 + \dfrac{u}{u + 1}$

  d. $\dfrac{\frac{1}{x}}{\frac{2}{x^2}}$

  e. $\dfrac{3}{t - 3} + \dfrac{5}{t^2 - 9}$

3. Simplify the compound fractional expressions.

a. $\dfrac{x + \frac{1}{x+2}}{x + 3}$

b. $\dfrac{\frac{x}{y} - \frac{y}{x}}{x + y}$

c. $\dfrac{1 + \frac{1}{c-1}}{1 - \frac{1}{c-1}}$

d. $1 + \dfrac{1}{1 + \frac{1}{1+x}}$