ALGEBRA 2
PROBLEM SET 03

DUE DATE: JANUARY 29, 2024

Question 1. Simplify the following rational expressions

(a) $\dfrac{x+1}{x+2} + \dfrac{x+2}{x-2}$

(b) $\dfrac{x+1}{x+2} \cdot \dfrac{x+2}{x-2}$

(c) $\dfrac{x+1}{x+2} \div \dfrac{x+2}{x-2}$

(d) $\dfrac{1}{x-1} + \dfrac{2}{x+1}$

(e) $\dfrac{3}{x+1} \cdot \dfrac{4}{x-1}$

(f) $\dfrac{\dfrac{1}{x-1} + \dfrac{2}{x+1}}{\dfrac{3}{x+1} \cdot \dfrac{4}{x-1}}$

(g) $\dfrac{3}{x(x+1)} + \dfrac{2}{x+1} - \dfrac{1}{(x+1)^2}$

Question 2. Combine the fractions

(a) $\dfrac{3x}{x+1} + 2$

(b) $\dfrac{3}{x+1} + \dfrac{2}{x-1}$