ACMAT117 Fall 2025
Professor Manguba-Glover
Sections 4.7 Classwork (CW 18) Name: _____

Complete as many of the following problems as you can with your group. You do not have to go in order.

(1) Solve $\frac{3}{x+5} + \frac{4}{x} = 2$

(2) Solve $1 - x - \frac{2}{6x+1} = 0$

(3) Solve $\frac{3x^2-6x-3}{(x+1)(x-2)(x-3)} + \frac{5-2x}{x^2-5x+6} = 0$

(4) Solve $x^3 + 2x^2 - x - 2 > 0$

(5) Solve $2x^4 > 3x^3 + 9x^2$

(6) Solve $\frac{x-1}{x^2-x-2} \geq 0$

(7) Solve $x < \frac{1}{x}$

(8) Solve $\frac{x^2-8x-9}{x} < 0$

(9) Solve $\frac{2x^3+5x^2-7x}{3x^2+7x+4} > 0$

(10) Solve $1 + \frac{1}{x} \geq \frac{1}{x+1}$

Key:

(1) $-\frac{5}{2}, -4$
(2) $x = \frac{1}{3}, \frac{1}{2}$
(3) $x = 1$
(4) $(-2,-1) \cup (1,\infty)$
(5) $\left(-\infty, -\frac{3}{2}\right) \cup (3,\infty)$
(6) $(-1,1] \cup (2,\infty)$
(7) $(-\infty,-1) \cup (0,1)$
(8) $(-\infty,-1) \cup (0,9)$
(9) $\left(-\frac{7}{2}, -\frac{4}{3}\right) \cup (-1,0) \cup (1,\infty)$
(10) $(-\infty,-1) \cup (0,\infty)$