

Name: _____
Date: _____
Class: _____

Algebra
Unit 8
HW 8-3

1) Solve the following system algebraically

$$y = 2x^2 - 2x + 1 \quad \text{and} \quad y = 4x + 1$$

2) Solve the following system algebraically:

$$y = 2x^2 + 5x + 3 \quad \text{and} \quad y = x^2 + 9x + 15$$

3) Solve: $16x = 20 - 21x^2$

4) For which x will $f(x) = 0$: $f(x) = x^3 + 24x^2 - 180x$

5) If $f(x) = x^2 - 6x + 7$ and $g(x) = x - 3$, find all points where $f(x) = g(x)$

6) If $f(x) = 4x + 6$, $g(x) = x^2 + 25x + 144$, and $h(x) = 6x + 20$, find any x values that will solve the following: $g(x) = f(x) + h(x)$

7) Solve: $12x^2 - 75 = -80x$

8) Solve: $2x^3 - 12x^2 = 560x$