Name: _____
Date: _____
Class: _____

Algebra
Unit 7
HW 7-3

1) Find the GCF: $24x^3$, $16x^2$, and $8x$

$8x$

2) Find the GCF: $18x^2y^2$, $45x^2y$, and $90xy^2$

$9xy$

3) Factor: $\frac{6x^3}{2x} - \frac{8x^2}{2x} + \frac{2x}{2x}$

GCF → $2x$ $\quad 2x(3x^2 - 4x + 1)$

4) Factor: $\frac{8x^4}{2x^2} - \frac{2x^2}{2x^2}$

GCF → $2x^2$

$2x^2(4x^2 - 1)$

5) Factor: $\frac{(2x-1)(2x+7)}{(2x-1)} - \frac{(2x-1)(x-3)}{(2x-1)}$

GCF → $(2x-1)$

$(2x-1)(2x+7-(x-3))$

$(2x-1)(2x+7-x+3)$

$(2x-1)(x+10)$

6) The area of a rectangle is represented by $16x^2 + 56x$. Can this be factored? What could each of the two factors represent?

$8x$ $8x$

GCF → $8x$

$8x(2x+7)$

length & width

7) Find two factors of 154 that when added together total 29.

+7 and +22

154

1 154

2 77

7 + 22 = 29

11 14

8) Find two factors of -224 that when added together total -20.

+8 and -28

-224 opposites

1 -224

2 -112

4 -56

7 -32

8 + -28 = -20

14 -16

9) Simplify: $(2x^2 - 8x)(7 - 4x) - 5x^2 + 19$

$14x^2 - 8x^3 - 56x + 32x^2$

$-8x^3 + 18x^2 - 56x$