Name_____

# Factoring is contagious

Hour_____

**Factor each completely. Pay attention to the fact that these are expressions and we are NOT solving.**

1) $x^2 + 4x - 21$

2) $x^2 + 15x + 56$

3) $-7x^2 - 31x - 12$

4) $42x^2 - 318x - 540$

5) $8x^2 - 44x + 56$

6) $-10x^2 + 47x + 15$

7) $-9x^2 - 85x - 36$

8) $-45x^2 - 230x - 200$

9) $6x^2 + 29x + 30$

10) $9x^2 + 30x + 16$

**Solve each equation by factoring.**

11) $2x^2 + 12x - 14 = 0$

12) $5x^2 - 15x - 200 = 0$

13) $4 + 11x = 2 - 5x^2$

14) $2x^2 + 39x + 20 = -5x^2$

# Answers to Factoring is contagious

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

2) $(x + 8)(x + 7)$

3) $-(7x + 3)(x + 4)$

4) $6(7x + 10)(x - 9)$

5) $4(2x - 7)(x - 2)$

6) $-(x - 5)(10x + 3)$

7) $-(x + 9)(9x + 4)$

8) $-5(x + 4)(9x + 10)$

9) $(2x + 3)(3x + 10)$

10) $(3x + 8)(3x + 2)$

11) $x = 1, x = -7$

12) $x = -5, x = 8$

13) $x = -\dfrac{1}{5}, x = -2$

14) $x = -\dfrac{4}{7}, x = -5$