YL Honors Math 2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Unit 1 Lesson 6 Homework: Factoring by Grouping**

**Factor Completely – Do not simplify by combining like terms before factoring.**

**If the polynomial cannot be factored write PRIME.**

1. $x^{3}+x^{2}+x+1$ 2. $x^{3}+x^{2}-9x-9$ 3. $4x\left(x+1\right)-9(x+1)$

4. $6x^{2}-10x+3x-5$ 5. $3x^{3}+6x^{2}-4x-8$ 6. $5x^{2}-5x-3x+3$

7. $30x^{2}-6x+15x-3$ 8. $49xy-21x-7y+3$ 9. $24w^{3}-15+12w^{2}-30w$

CHALLENGE: $4x^{4}-4x^{2}-100x^{2}+100$

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