Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Factor the following polynomials using factoring by grouping. Factor each polynomial completely.*

1. $x^{3}-4x^{2}+3x-12$ 2. $x^{3}+6x^{2}-9x-54$

3. $3x^{3}-4x^{2}+15x-20$ 4. $2x^{4}-3x^{3}-16x+24$

5. $4x^{3}+4x^{2}-25x-25$ 6. $4x^{3}+18x^{2}-10x-45$

7. $15x^{3}+6x^{2}-10x-4$ 8. $4x^{3}+5x^{2}-100x-125$

9. $9x^{3}-54x^{2}-4x+24=0$ 10. $x^{3}-2x^{2}-4x+8=0$