Name:_____ Alg 1 H Factor by Grouping Homework ☺

Factor the following polynomials by grouping. REMEMBER: Some polynomials might need to be rewritten in order to be able to factor.

1. $x^3 - 6x^2 + 2x - 12$

2. $x^3 + 9x^2 + 4x + 36$

3. $x^3 - 14x^2 + x - 14$

4. $x^3 + 3x^2 + 5x + 15$

5. $m^2 + 8m - m - 8$

6. $x^2 - x + 2x - 2$

Factor the following polynomials by grouping. Then, solve for x. REMEMBER: Some polynomials might need to be rewritten in order to be able to factor.

7. $x^3 + x^2 - 25x - 25$

8. $x^3 + x^2 - 16x - 16$

9. $n^3 - n^2 - 4n + 4$

10. $p^2 + p + 3p + 3$