Factor the following quadrinomials by grouping and factoring out the common binomial factor. Some problems might require rearranging the terms and regrouping to come up with common binomial factors.

1. $ax - ay - bx + by$

2. $2x + ay + ax + 2y$

3. $5c + bd - bc - 5d$

4. $px - py - qx + qy$

5. $-4x + yz + xy - 4z$

6. $2x + a + 2bx + ab$

7. $ax - b - 2b^2 + 2axb$

8. $x^2y - 1 - x + xy$

9. $pq - r - 3r^2 + 3pqr$

10. $2x^3 + 3x + 2x^2 + 3$

11. $5x^3 - 2x^2 + 5x - 2$

12. $6x^3 - 12x^2 - 4x + 8$