Unit 10.1 Factoring Polynomials

1. Find the GCF of each set of terms
    a. {9,14,22}

    b. {5, 15, 20}

    c. {6, 20, 42}

    d. $\{8a^3, 16a^4, 20a^2\}$

    e. $\{26ab^2, 39a^2b, 52a^2b^2\}$

    f. $\{8x^2y^3, 32x^2y, 64x^2y^2\}$

2. Simplify each expression
    a. $\frac{9x^5}{3x^2}$

b. $\frac{21x^4y^3}{-3xy^2}$

c. $\frac{-36x^2y}{-12xy^3}$

d. $\frac{-144x^3y^7}{72x^8y^2}$

3. Complete the factoring
   a. $13ab^2 + 13ab = 13ab$ (_____)

   b. $-5xy^2 - 20x^2y - 5xy = -5xy$ (_____)

4. Factor each of the polynomials by finding the GCF
    a. $11x - 121$

    b. $10x^2y - 25xy$

    c. $6x^2y - 25xy$

    d. $-56x^4z^3 - 98x^3z^4 - 35x^2z^5$

5. Factor each expression by grouping
    a. $7y^2(y+3) + 2(y+3)$

    b. $10y(2y+3) - 7(2y+3)$

    c. $bx + b + cx + c$

d. $5xy + yz - 20x - 4z$

e. $10xy - 2y^2 + 7yz - 35xz$

f. $5xy + 6uv - 3vy - 10ux$