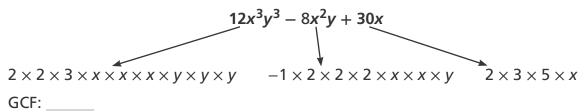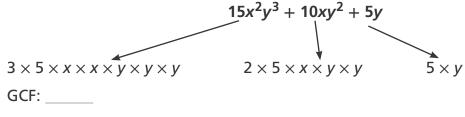# 7-4 Reteach to Build Understanding

Factoring Polynomials

1. For the polynomial, circle the common factors to determine the GCF and write it in the blank. Use the GCF to write the factored form of the polynomial.
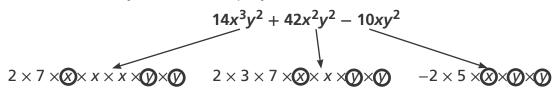
$$12x^3y^3 - 8x^2y + 30x$$

$2 \times 2 \times 3 \times x \times x \times x \times y \times y \times y \qquad -1 \times 2 \times 2 \times 2 \times x \times x \times y \qquad 2 \times 3 \times 5 \times x$

GCF: _____

Factored polynomial: _____ $(6x^2y^3 - 4xy + 15)$

2. Circle the GCF of the polynomial $15x^2y^3 + 10xy^2 + 5y$.

Use the GCF to write the factored form of the polynomial.

$$15x^2y^3 + 10xy^2 + 5y$$

$3 \times 5 \times x \times x \times y \times y \times y \qquad 2 \times 5 \times x \times y \times y \qquad 5 \times y$

GCF: _____

Factored polynomial: _____

3. James incorrectly factored the polynomial. Find and correct his error.

$$14x^3y^2 + 42x^2y^2 - 10xy^2$$

$2 \times 7 \times \widehat{x} \times x \times x \times \widehat{y} \times \widehat{y} \qquad 2 \times 3 \times 7 \times \widehat{x} \times x \times \widehat{y} \times \widehat{y} \qquad -2 \times 5 \times \widehat{x} \times \widehat{y} \times \widehat{y}$

The greatest common factor is xy^2.

The factored form of the polynomial is $xy^2(14x^2 + 42x - 10)$.