Check Up

1. Determine the GCF of x^3y^4 and $4xy^3$.

☑ Compare your answers.

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x^3y^4: $1, x, x^2, x^3, y, y^2, y^3, y^4$

$4xy^3$: $1, 2, 4, x, y, y^2, y^3$

The GCF of x^3y^4 and $4xy^3$ is $1xy^3$, or xy^3.

B. Writing a Monomial as the Product of its Factors

Once the GCF of a group of monomials has been determined, each monomial can be written as the product of the GCF and another monomial factor. The other monomial factor can be determined by dividing the original monomial by the GCF.

Example 1

The GCF of $20p^2q^2$ and $45p^3q^4$ is $5p^2q^2$. Write each monomial as a product of the GCF and another monomial factor.

Divide each monomial by the GCF, $5p^2q^2$.

$$\frac{20p^2q^2}{5p^2q^2} = 4 \qquad\qquad \frac{45p^3q^4}{5p^2q^2} = 9pq^2$$

$20p^2q^2 = (5p^2q^2)(4)$ and $45p^3q^4 = (5p^2q^2)(9pq^2)$

Check Up

1. Write each of $18ab^3$ and $27a^3b$ as the product of their GCF and another monomial factor.