

# Adding Rational Expressions with Different Denominators

## • Example 1

Add  $\frac{2}{3x^2y} + \frac{3}{4x^3}$ .

The LCM of the two denominators  $3x^2y$  and  $4x^3$  is  $12x^3y$ . We obtain:

$$\begin{aligned}\frac{2}{3x^2y} + \frac{3}{4x^3} &= \frac{2 \cdot 4x}{3x^2y \cdot 4x} + \frac{3 \cdot 3y}{4x^3 \cdot 3y} \\ &= \frac{8x}{12x^3y} + \frac{9y}{12x^3y} \\ &= \frac{8x + 9y}{12x^3y}\end{aligned}$$

## • • • CHECK YOURSELF 1

Add.

$$\frac{2}{3x^2y} + \frac{1}{6xy^2}$$


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## • • • CHECK YOURSELF ANSWER

1.  $\frac{4y + x}{6x^2y^2}$ .

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# 5.14 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_

Add or subtract as indicated.

2. \_\_\_\_\_

$$1. \frac{3}{y^2w^3} + \frac{w}{2y}$$

$$2. \frac{2x^2y}{wz^3} - \frac{3}{8w^2yz}$$

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

$$3. \frac{10s}{t^3u^2v^5} + \frac{9v}{s^5t^4u^3}$$

$$4. \frac{1}{x^3y^2} - \frac{3}{x^2yz^4}$$

$$5. \frac{18xy}{5z} + \frac{z}{xy}$$