

4.9

Multiplying Rational Expressions

• Example 1

Multiply the following fractions and simplify.

$$\frac{2x^3}{5y^2} \cdot \frac{10y}{3x^2} = \frac{2x^3 \cdot 10y}{5y^2 \cdot 3x^2} = \frac{4x}{3y}$$

• • • CHECK YOURSELF 1

Multiply and simplify.

$$\frac{3x^2}{5y^2} \cdot \frac{10y^5}{15x^3}$$

• • • CHECK YOURSELF ANSWER

1. $\frac{2y^3}{5x}$

4.9 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

Multiply and simplify.

$$1. \frac{3a}{2} \cdot \frac{4}{a^2}$$

$$2. \frac{5x^3}{3x} \cdot \frac{9}{20x}$$

$$3. \frac{6x}{5} \cdot \frac{10}{18x^2}$$

$$4. \frac{2xy}{9} \cdot \frac{3x}{4y^2}$$

$$5. \frac{21xz^5}{4y^8} \cdot \frac{6y^3}{7x^4z^2}$$

$$6. \frac{8x^2y^4}{9z^3} \cdot \frac{36yz^2}{16x^3}$$

$$7. \frac{48y^3z^6}{9x^2y} \cdot \frac{12x^4z^2}{16y^4z}$$

$$8. \frac{4ab^2}{15bc^3} \cdot \frac{20b^2c}{8ac^4}$$