

Algebra 2/Trig1  
9.4 Multiplying and Dividing Rational Expressions

Name \_\_\_\_\_  
Block \_\_\_\_\_ Date \_\_\_\_\_

**Review of Multiplying**

1.  $\frac{3}{4} \cdot \frac{5}{6} =$

2.  $\frac{4x}{3} \cdot \frac{9}{5x^2} =$

3.  $\frac{20xy^2}{3} \cdot \frac{x}{12} =$

**Multiplying** Multiply and simplify the following rational expressions.

4.  $\frac{12x^2y}{5y^2} \cdot \frac{2xy}{3x^2} =$

5.  $\frac{x^2 - 2x}{x^2 + 2x + 1} \cdot \frac{x^2 + 4x + 3}{x^2 + 3x} =$

6.  $\frac{4y^2}{9x} \cdot \frac{27}{16xy^2} =$

7.  $\frac{x^2 + 2x - 3}{x + 2} \cdot \frac{x^2 + 2x}{x^2 - 1} =$

### Review Dividing

$$1. \frac{3}{4} \div \frac{5}{8} =$$

$$2. \frac{\frac{3x}{5}}{\frac{6x^2}{25}} =$$

$$3. \frac{4xy^3}{5} \div \frac{x}{6} =$$

**Dividing** Divide and simplify the following rational expressions.

$$4. \frac{5x^5}{8} \div \frac{15x^2}{12} =$$

$$5. \frac{x^2 - 9x - 22}{x^2 + 5x - 24} \div \frac{x + 2}{x - 3} =$$

$$6. \frac{48x^2}{y} \div \frac{36xy^2}{5} =$$

$$7. \frac{\frac{12x^2y}{5y^2}}{\frac{3x^2}{2xy}} =$$

$$8. \frac{x^2}{x^2 - 1} \div \frac{3x}{x + 1} =$$

$$9. \frac{\frac{5x^2 - 20}{25x^2}}{\frac{x^2 + 6x + 8}{x^2 + 10x + 24}} =$$

Homework: Pg. 558 #28-34(evens) and Pg. 559 #36-46 (evens).