

Montgomery College  
Department of Mathematics  
Rockville Campus

**Supplementary Homework for Lesson 25**  
**Dividing Rational Expressions**

Divide and simplify.

1.  $\frac{m^2 - n^2}{m + n} \div \frac{m}{m^2 + mn}$

2.  $\frac{x^2 + 7x + 10}{x - 1} \div \frac{x^2 + 2x - 15}{x - 1}$

3.  $\frac{x^2 + 5x}{8} \div \frac{3x + 15}{9}$

4.  $\frac{6x + 2}{x^2 - 1} \div \frac{3x^2 + x}{x - 1}$

5.  $\frac{3x^2}{x^2 - 1} \div \frac{x^5}{(x + 1)^2}$

6.  $\frac{c^2 + 3c}{c^2 + 2c - 3} \div \frac{c}{c + 1}$

Answers:

1.  $m^2 - n^2$

2.  $\frac{x + 2}{x - 3}$

3.  $\frac{3x}{8}$

4.  $\frac{2}{x(x + 1)}$

5.  $\frac{3(x + 1)}{x^3(x - 1)}$

6.  $\frac{c + 1}{c - 1}$