**Multiplying and Dividing Rational Expressions**

**Multiplication**

**Recall:** $\frac{2}{3}∙\frac{6}{5}$

 **=**

 **=**

$∴\frac{A}{B}∙\frac{C}{D}= $ **where** $B\ne $ **,** $D\ne $

**Example 1**

**Simplify and state all restrictions.**

**a)** $\frac{7}{2x^{3}}∙\frac{x^{4}}{14}$ **b)** $\frac{3m+12}{5m}∙\frac{6m^{3}}{2m+8}$

**c)** $\frac{6n^{2}}{n+3}∙\frac{5n+15}{8n^{3}}$ **d)** $\frac{x^{2}+3xy}{x^{2}-xy-42y^{2}}∙\frac{x^{2}-10xy+21y^{2}}{x^{2}-9y^{2}}$

**Division**

**Recall:** $\frac{1}{2}÷\frac{5}{4}$

 **=**

 **=**

$∴\frac{A}{B}÷\frac{C}{D} $

$$=$$

$$=$$

$$=$$

**where** $B\ne $ **,**$ C\ne $ **,** $D\ne $

**Example 2**

**Simplify and state all restrictions.**

**a)** $\frac{y^{3}}{6}÷\frac{y^{2}}{3y-6}$ **b)** $\frac{x^{2}+5x+6}{2x+4}÷\frac{x^{2}-9}{x}$

**Homework: Pg 121 #1-3, 6ab, 7ab, 9, 10, (13)**