Chapter 9 Rational Functions

Fractions

1) $\frac{3}{4}\bullet\frac{10}{9}$	2) $\frac{2}{3}\div\frac{12}{5}$	3) $\frac{3}{4}-\frac{5}{6}$	4) $\frac{3}{4}+\frac{2}{3}$

Exponent Properties

1) $a^n \bullet a^m = a^{n+m}$	2) $\left(a^n\right)^m = a^{n\bullet m}$	3) $\frac{a^n}{a^m} = a^{n-m}$	4) $a^0 = 1$
5) $a^{-n} = \frac{1}{a^n}$	6) $\frac{1}{a^{-n}} = a^n$	7) $(ab)^n = a^n \bullet b^n$	8) $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$

Factoring

1) $-12x^3+8x^2$	2) $2x^2+10x+12$	3) $x^2+2xy-8y^2$	4) $6x^2-5x-4$
5) $4x^6-81y^2$	6) $100x^2-140x+49$	7) x^3+27	8) $8x^6-125y^3$

9-4 Rational Expressions

1) $\frac{12x^5y^{-6}}{4x^{-4}y^2}$	2) $\frac{x^2-16}{5x-20}$	3) $\frac{30x^6}{5y^{-4}}\div\frac{3x^{-2}}{10y}$

4) $\frac{2x^2-2}{4x} \div \frac{x^2+3x+2}{2x^2+4x}$	5) $\frac{x-1}{x^2-5x+4} \bullet (12-3x)$	6) $\frac{\frac{3x^5}{x-5}}{\frac{6x^3}{2x-10}}$

9-5 Adding and Subtracting Rational Expressions

1) $\frac{x^2}{4x}+\frac{3x}{4x}$	2) $\frac{x^2+2}{x^2-9}-\frac{11}{x-3}$	3) $\frac{x}{x^2-x-2}+\frac{x+5}{x^2-1}$

9-6 Solving Rational Equations

1) $\frac{x-3}{x+4}=\frac{2}{x}$	2) $\frac{x}{4}-x=\frac{3}{2x}$	3) $\frac{3}{x^2-4}-\frac{4}{x+2}x=\frac{1}{x-2}$