Operations on Rational Expressions Answer Key

Add 'Em Up, Rawhide!

Perform the following operations on rational expressions.

1. $\frac{2x^3-x^2-x}{2x^2+5x+2} \times \frac{x+2}{x}$

   $x-1$

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

   $\frac{2x-1}{x+3}$

3. $\frac{3x^2+7x+4}{x^2+3x+2} \div \frac{1}{2}$

   $\frac{6x+8}{x+2}$

4. $\frac{x^2+2xy+y^2}{x+y} \div \frac{4y+4x}{2x+2x}$

   x

5. $\frac{-3x^2+13x+10}{x^2+4x+3} \div \frac{5-x}{x+3}$

   $\frac{3x+2}{x+1}$

6. $\frac{2y^2+5y+2}{y^3+4} + \frac{4y+7}{y^3+4}$

   $\frac{2y^2+9y+9}{y^3+4}$

7. $\frac{3x^2-10}{3x+5} - \frac{2x^3+7}{3x+5}$

   $\frac{3x^2-2x^3-17}{3x+5}$

8. $\frac{2x}{x^2+5x+6} - \frac{1}{x+3}$

   $\frac{x^2+x-6}{x^2+5x+6}$

9. $\frac{2x}{x^2-9} + \frac{1}{x+3}$

   $\frac{3(x-1)}{x^2-9}$

10. $\frac{6}{x^2-4x-5} - \frac{5}{x^2-3x-4}$

    $\frac{1}{x^2-9x+20}$
