7.2

Key

2

Practice with Rational Expressions

Perform the indicated operations. Don't forget to list the restrictions!

1. $\frac{4x^2-121}{6x-33}$

$x \neq \frac{11}{2}$

$\frac{(2x+11)}{3}$

2. $\frac{4x^2-49}{3x^2} \div \frac{28+8x}{10x}$

$x \neq 0, -\frac{7}{2}$

$\frac{5(2x-7)}{6x}$

3. $\frac{x^2+11x+30}{x^2-9x-10} \cdot \frac{x^2-7x-8}{x^2-3x-40}$

$x \neq 10, -1, 8, -5$

$\frac{(x+6)}{(x-10)}$

4. $\frac{\frac{x^2+2x-48}{x^2-6x}}{\frac{x^2-36}{7x^2-42x}}$

$x \neq 0, 6, -6$

$\frac{7(x+8)}{(x+6)}$

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

$x \neq 2, 4$

$\frac{-2}{(x-2)}$

6. $\frac{x^2-x}{x^2+13x-14} \cdot \frac{x^2+11x-42}{x^2-9}$

$x \neq -14, 1, -3, 3$

$\frac{x}{(x+3)}$

7. $\frac{3x^2+11x+10}{6x+10}$

$x \neq -\frac{5}{3}$

$\frac{(x+2)}{2}$

8. $\frac{x^2-81}{36-4x} \div \frac{x^2+2x-63}{2x-14}$

$x \neq 9, 7, -9$

$-\frac{1}{2}$

9. $\frac{\frac{4x-12}{3x^2-6x}}{\frac{2x^2-6x}{5x^3-10x^2}}$

$x \neq 0, 2, 3$

$\frac{10}{3}$

10. $\frac{x^2-5x}{x^2-12x+35} \cdot \frac{x^2-8x-33}{2x^3+6x^2}$

$x \neq 5, 7, 0, -3$

$\frac{(x-11)}{2x(x-7)}$

11. $\frac{2x^2-7x-30}{6x^2+x-35}$

$x \neq -\frac{5}{2}, \frac{7}{3}$

$\frac{(x-6)}{(3x-7)}$

12. $\frac{x^2-2x-8}{8x+24} \div \frac{2x-8}{x^2+7x+12}$

$x \neq -3, -4, 4$

$\frac{(x+2)(x+4)}{16}$