6.1 REDUCING RATIONAL EXPRESSIONS

1. $\frac{7}{7}$ $\frac{X}{X}$ $\frac{X+3}{X+3}$ $\frac{X-5}{X-5}$

2. $\frac{7}{-7}$ $\frac{-X}{X}$ $\frac{X-3}{3-X}$ $\frac{X-Y}{Y-X}$

3. $\frac{5}{7}$ $\frac{X}{Y}$ $\frac{X+5}{X+7}$ $\frac{X+4}{X-4}$

4. $\frac{4}{2}$ $\frac{14X^2Y}{7XY}$ $\frac{8X+4}{4}$ $\frac{2X+6}{X+3}$

5. $\frac{2}{10}$ $\frac{3X^2}{15X^3}$ $\frac{7X}{7X+7}$ $\frac{X-2}{5X-10}$

6. $\frac{6}{10}$ $\frac{10X^2Y^4}{15XY^5}$ $\frac{6X^2-12X}{9X}$ $\frac{5X^2+5X}{10X^2+15X}$

REMEMBER:
If there is addition and/or subtraction you need to factor before canceling.

SIMPLIFY:

1. $\frac{16x^2y}{24xy^3}$

2. $\frac{5x-15}{5x}$

3. $\dfrac{8x^2-4x}{5x^2-5x}$

4. $\dfrac{x^2-9}{x^2+9x+18}$

5. $\dfrac{2x^2-8}{2x+4}$

6. $\dfrac{2x^2-6x-20}{4x^2+20x+24}$

7. $\dfrac{3x-5}{5-3x}$

8. $\dfrac{5xy-3y}{9-15x}$

9. $\dfrac{x^2-16}{4-x}$

10. $\dfrac{3y+3}{y^2+4y+3}$

11. $\dfrac{(x-2)^2}{x^2-4}$

12. $\dfrac{6x-12}{2-x}$