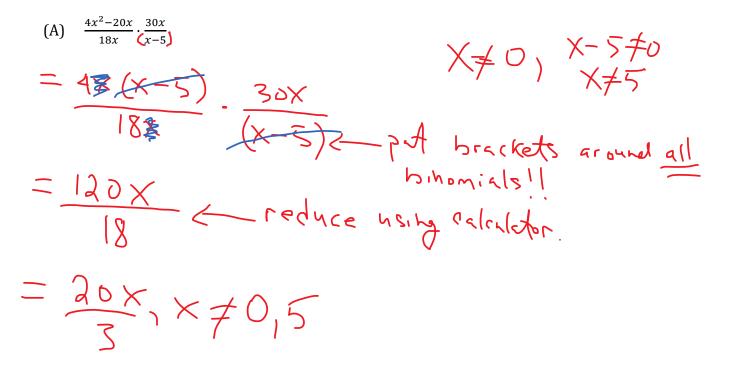
Math 3201 4.3A Multiplying Rational Expressions

Steps:

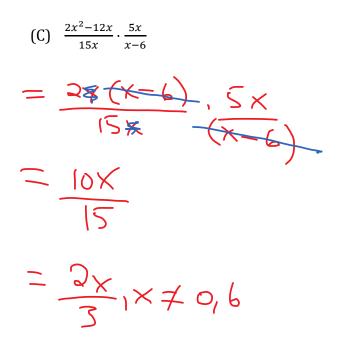
- Where possible, factor the numerators and denominators of both expressions.
- Cancel common factors.
- Determine the restrictions by calculating the non-permissible values.
- State the simplified answer along with restrictions.

Example 1:



$$(B) \frac{18x^{3}}{5x-15x^{2}} \cdot \frac{1-9x^{2}}{24x^{2}}$$

$$= \underbrace{(1)}_{5x} \cdot \underbrace{(1+3x)(1-3x)}_{24x^{2}} \qquad X \neq 0 \qquad 1-3x \neq 0 \\ -3x(4-1) \\ -3x \neq -1 \\ -3x = -3 \\ -3x = -1 \\ -3x = -3 \\ -3x$$

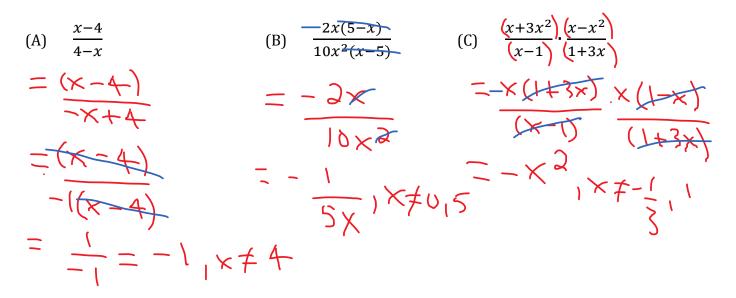


Reversal of a Difference of Terms

A peculiar case happens when we get two terms reversed with a difference. Once we understand how it works we can use a shortcut from then on.

Example 2:

Simplify:



Textbook Questions: page 238, 239 #1(a,c), 2(a,b), 3(a,d),4(a,c), 5(a), 6, 9