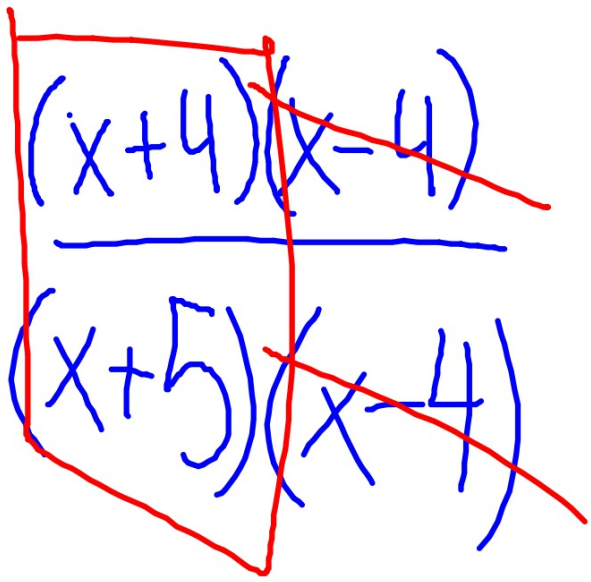
Algebra Lesson 11-2A Multiplying and Dividing Rational Expressions

Simplify the Rational Expression

$$\frac{x^2 - 16}{x^2 + x - 20}$$



Due Next Class: 11-2A p.537 #1-15 odds; #29

Multiplying Rational Expressions

$$\frac{3}{x} \cdot \frac{4}{x^2} = \frac{12}{x^3}$$

$$\frac{x}{x+4} \cdot \frac{x-3}{x-2}$$

$$\frac{x(x-3)}{(x+4)(x-2)}$$

$$\frac{4x+1}{5x+10} \cdot \frac{30x+60}{2x-2} = \frac{(4x+1)\cdot 30(x+2)}{5(x+2)\cdot 2(x-1)}$$

$$= \frac{30(4x+1)}{10(x-1)}$$

$$\frac{3(4x+1)}{(x-1)}$$

Multiplying Rational Expressions

$$\frac{3s+2}{2s+4} \cdot \frac{(s^2+5s+6)}{1}$$

3 · 2 = 6, 5

$$\frac{(3s+2)(s+3)(s+2)}{2(s+2)}$$

$$\frac{(3s+2)(s+3)}{2}$$

Multiply.

1. $\frac{7}{3} \cdot \frac{5x}{12}$

2. $\frac{3}{t} \cdot \frac{4}{t}$

3. $\frac{5}{3a^2} \cdot \frac{8}{a^3}$

4. $\frac{m-2}{m+2} \cdot \frac{m}{m-1}$

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

6. $\frac{6x^2}{5} \cdot \frac{2}{x+1}$

7. $\frac{4c}{2c+2} \cdot \frac{c+1}{c-1}$

8. $\frac{5x^3}{x^2} \cdot \frac{3x^4}{6x}$

9. $\frac{3t}{t-2} \cdot \frac{3t-6}{t^2}$

10. $\frac{m-2}{3m+9} \cdot \frac{2m+6}{2m-4}$

11. $\frac{x-5}{4x+6} \cdot \frac{6x+9}{3x-15}$

12. $\frac{4x+1}{5x+10} \cdot \frac{30x+60}{2x-2}$

13. $\frac{4t+4}{t-3} \cdot (t^2 - t - 6)$

14. $\frac{2m+1}{3m-6} \cdot (9m^2 - 36)$

15. $(x^2 - 1) \cdot \frac{x-2}{3x+3}$

29. $\frac{t^2+5t+6}{t-3} \cdot \frac{t^2-2t-3}{t^2+3t+2}$ $\frac{2x(x-1)}{3(x+1)}$

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