

Simplifying Rational Expressions Puzzle

Name _____

Simplify each expression by performing the indicated operation, and show all work. Write the matching letters above each answer to complete the math riddle. The three words that are formed by matching a letter with a solution go in the blanks.

$\frac{x^2+4x+3}{x^2+5x+6} \times \frac{x^2-3x-10}{x^2+x}$ <p style="text-align: right;">IP</p>	$\frac{x^3-9x}{x^2+6x+9} \times \frac{x^3+3x^2}{x-3}$ <p style="text-align: right;">NG</p>	$\frac{x^2-4}{2x+2} \times \frac{x^2-5x-6}{x^2-6x+8}$ <p style="text-align: right;">VI</p>
$\frac{2x^2+4x}{x^2-4} \div \frac{x^2-3x+2}{3x-6}$ <p style="text-align: right;">ED</p>	$\frac{3x^2+4x+1}{x^2-4} \div \frac{x+1}{x^2+8x+12}$ <p style="text-align: right;">BY</p>	$\frac{x}{x^2-4x+3} + \frac{5}{x-3}$ <p style="text-align: right;">DI</p>
$\frac{x-2}{x^2+x-12} + \frac{x}{x^2-2x-3}$ <p style="text-align: right;">MU</p>	$\frac{3}{x+1} + \frac{2}{x-3}$ <p style="text-align: right;">LI</p>	$\frac{x}{x-5} - \frac{3}{x+2}$ <p style="text-align: right;">DI</p>

$$\frac{2x}{x+4} - \frac{x^2+4}{x^2-16}$$

LT

$\frac{2x^2 + 3x - 2}{(x + 4)(x - 3)(x + 1)}$	$\frac{x^2 - 8x - 4}{(x + 4)(x - 4)}$	$\frac{x - 5}{x},$	$\frac{5x - 7}{(x + 1)(x - 3)}$	$\frac{6x}{(x - 2)(x - 1)}$

$$\frac{(3x + 1)(x + 6)}{(x - 2)}$$

$\frac{x^2 - x + 15}{(x + 2)(x - 5)}$	$\frac{(x + 2)(x - 6)}{2(x - 4)}$	$\frac{6x - 5}{(x - 3)(x - 1)},$	x^3

Why did the amoeba flunk the math test?
Because it _____ !