MULTIPLYING RATIONAL EXPRESSIONS

1. FACTOR EVERYTHING
2. CANCEL IF POSSIBLE (ON CANCELING, ONE MUST BE ON TOP AND ONE ON BOTTOM)
3. PUT TOPS TOGETHER
   PUT BOTTOMS TOGETHER

(8) $\frac{3x^7}{x+8} \cdot \frac{x^2+12x+32}{12x^2}$ (PSD)

$\frac{3x^7}{x+8} \cdot \frac{(x+4)(x+8)}{12x^2}$

$\frac{x^7}{x+8} \cdot \frac{(x+4)(x+8)}{4x^2}$

$\frac{x^7}{1} \cdot \frac{x+4}{4x^2}$

$\frac{x^5}{1} \cdot \frac{x+4}{4}$

$\frac{x^5(x+4)}{4}$

(9) $\frac{5x^2+8x-21}{x^2-6x-27} \cdot \frac{x^2+4x-32}{5x^2-27x+28}$ (KEY# / PSD / PSD / VERT#)

$\frac{(5x-7)(x+3)}{(x-9)(x+3)} \cdot \frac{(x+8)(x-4)}{(5x-7)(x-4)}$

$\frac{x+8}{x-9}$

(10) $\frac{2y^2-13y+15}{4y^2-8y+3} \cdot \frac{6y^2+y-2}{5-y}$ (VERT# / VERT# / WRONG ORDER)

$\frac{(2y-3)(y-5)}{(2y-1)(2y-3)} \cdot \frac{(2y-1)(3y+2)}{-y+5}$ (GCF)

$\frac{y-5}{1} \cdot \frac{3y+2}{-1(y-5)} = \frac{3y+2}{-1} = -3y-2$

(11) $\frac{p^2-9p+14}{p^2-12p+35} \cdot (p-5)$ (PSD / PSD)

$\frac{(p-2)(p-7)}{(p-5)(p-7)} \cdot \frac{p-5}{1}$

$\frac{p-2}{1}$

$p-2$