7) $\frac{2x+4}{x+y} \cdot \frac{x^2-y^2}{4x+8} = \frac{2x+4}{x+y} \times \frac{(x-y)\times(x+y)}{4x+8}$

$\frac{2x+4}{x+y} \times \frac{(x-y)\times(x+y)}{2\cdot(2x+4} = \frac{1}{x+y} \times \frac{(x-y)\times(x+y)}{2}$

$\frac{x-y}{2}$

2) $\frac{y^2+8y+15}{y^2-25} \cdot \frac{4y-20}{4x+8} = \frac{y^2+5y+3y+5}{y^2-25} \times \frac{4y-20}{4x+8}$

$\frac{y^2+5y+3y+75}{(y-5)x(y+5)} \times \frac{4y-20}{4x+8} = \frac{y^2+5y+3y+15}{(y-5)x(y+5)} \times \frac{4(y-5)}{4x+8}$

$\frac{y^2+5y+3y+75}{(y-5)x(y+5)} \times \frac{4(y-5)}{4(x+2)} = \frac{yx(y+5)+3y+75}{(y-5)x(y+5)} \times \frac{4(y-5)}{4(x+2)}$

$\frac{yx(y+5)+3(y+5)}{(x-5)x(y+5)} \times \frac{4(y-5)}{4(x+2)} = \frac{yx(y+5)+3(y+5)}{(y-5)x(y+5)} \times \frac{y-5}{x+2}$

$\frac{yx(y+5)+3(x+5)}{y+5} \times \frac{1}{x+2} = \frac{(x+5)x(y+3)}{y+5} \times \frac{1}{x+2}$

$(y+3) \times \frac{1}{x+2} = \frac{y+3}{x+2}$

3) $\frac{x^3+64}{x^2-16} \cdot \frac{6x-24}{x^3-4x^2+16x} = \frac{(x+4)x(x^2-4x+16)}{x^2-16} \times \frac{6x-24}{x^3-4x^2+16x}$

$\frac{(x+4)x(x^2-4x+16)}{(x-4)x(x+4)} \times \frac{6x-24}{x^3-4x^2+16x} = \frac{(x+4)x(x^2-4x+16)}{(x-4)x(x+4)}$

$\times \frac{6(x-4)}{x^3-4x^2+16x} = \frac{(x+4)x(x^2-4x+16)}{(x-4)x(x+4)} \times \frac{6(x-4)}{xx(x^2-4x+16)}$

$\frac{x^2-4x+16}{x-4} \times \frac{6(x-4)}{x(x^2-4x+16)} = \frac{1}{x-4} \times \frac{6(x-4)}{x} = \frac{6}{x}$

4) $\frac{5x^2+13x-6}{4-25x} \cdot \frac{10x+4}{9-x^2} : \frac{5x^2+15x-2x-6}{4-25} \times \frac{10x+4}{9-x^2}$

$\frac{5x^2+15x-2x-6}{4-25} \times \frac{10x+4}{(3-x)\times(3+x)} : \frac{50x^2-8}{25x^2-79x+72}$

$\frac{50x^2-8}{25x^2-79x+72}$