2.2

Effectuer et réduire :

1) $\dfrac{a+7}{a-1} \cdot \dfrac{a^2-1}{2a+14} = \dfrac{(a+7)(a-1)(a+1)}{(a-1)\cdot 2(a+7)} = \dfrac{a+1}{2}$

2) $\dfrac{x+5}{7} \div \dfrac{2x+10}{x-8} = \dfrac{(x+5)(x-8)}{7\cdot(2x+10)} = \dfrac{(x+5)(x-8)}{7\cdot 2(x+5)} = \dfrac{x-8}{14}$

6) $\dfrac{9x^2-4}{3x^2-5x+2} \cdot \dfrac{9x^4-6x^3+4x^2}{27x^4+8x}$

$\Delta = 25-4\cdot 3\cdot 2 = 1$

$x_{1,2} = \dfrac{5\pm 1}{6} = \begin{cases} 1 \\ \frac{2}{3} \end{cases}$

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

$= (x-1)(3x-2)$

$= \dfrac{(3x+2)(3x-2)\cdot x^2(9x^2-6x+4)}{(x-1)(3x-2)\cdot x(27x^3+8)}$

$= \dfrac{x(3x+2)(9x^2-6x+4)}{(x-1)(3x+2)(9x^2-6x+4)}$

$= \dfrac{x}{x-1}$