

$$f: x \in \mathbb{R} \setminus \{-1\} \longrightarrow \frac{2x+1}{x+1} \in \mathbb{R} \quad f(x) = \frac{2x+1}{x+1}$$

$$g: x \in \mathbb{R} \longrightarrow x+1 \in \mathbb{R} \quad g(x) = x+1$$

$$f(g(x)) = \frac{2g(x)+1}{g(x)+1} = \frac{2(x+1)+1}{(x+1)+1} = \frac{2x+2+1}{x+2} = \frac{2x+3}{x+2}$$

$$g(f(x)) = f(x) + 1 = \frac{2x+1}{x+1} + 1 = \frac{2x+1+x+1}{x+1} = \frac{3x+2}{x+1}$$

$$f(g(x)) + g(f(x)) =$$

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

$$= \frac{2x^2+3x+2x+3+3x^2+2x+6x+4}{(x+1)(x+2)} = \frac{5x^2+13x+7}{(x+1)(x+2)}$$