

$$1 \quad ① \quad a) \quad \left(\frac{f}{g}\right)(2) = \frac{f(2)}{g(2)} = \frac{5}{\frac{5}{5}} = ⑤$$

$$b) \quad x \xrightarrow{f} x^2 + 1 \xrightarrow{g} \frac{2(x^2+1)+1}{x^2+1+3} = \frac{2x^2+3}{x^2+4}$$

$$3 \quad (g \circ f)(x) = \frac{2x^2+3}{x^2+4}$$

$$1 \quad c) \quad (f \circ g)(-4) = f(g(-4)) = f\left(\frac{-7}{-1}\right) = f(7) = 49+1 = 50$$

$$d) \quad g^{-1}(6)$$

$g^{-1}$	$x \mid 6$	$y \mid ?$	↔	$g$	$x \mid ?$	$y \mid 6$
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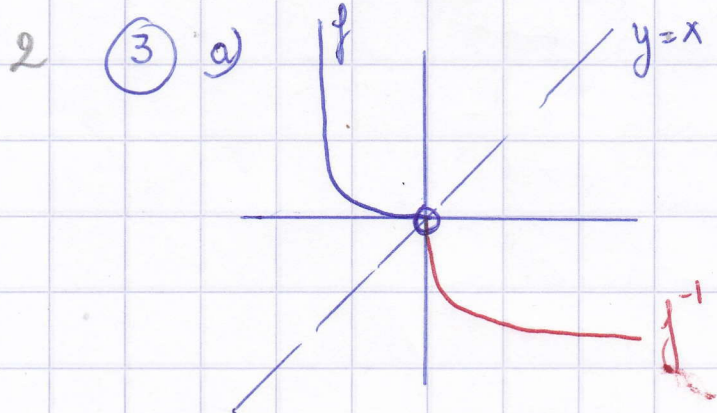
$$\frac{2x+1}{x+3} = 6 \Leftrightarrow \frac{2x+1}{x+3} - \frac{6x+18}{x+3} = 0$$

$$\Leftrightarrow \frac{-4x-17}{x+3} = 0 \quad \begin{array}{l} T: x = -\frac{17}{4} \\ N: x = -3 \end{array}$$

$$3 \quad \text{Antw} \quad g^{-1}(6) = -\frac{17}{4}$$

$$1 \quad e) \quad (g \circ g^{-1})(8) = 8$$

$$2 \quad ② \quad f(f(f(8))) = f(f(f(2^3))) = f(f(2^6)) = f(2^{12}) = 2^{24} \quad ①$$



$f$  is invertierbar  
want de grafiek van  
 $f$  is een functie



2

$$b) f^{-1}(x) = -\sqrt[14]{x}$$

c) De grafieken van  $f$  en  $f^{-1}$  zijn elkaars  
inversen tov  $y = x$  (1<sup>ste</sup> bissectrice)

④

$$f(x) = \sqrt{x+5}$$

$$x+5 \geq 0$$

$$x \geq -5$$

$$y = \sqrt{x+5}$$

$$x \geq -5$$

$$y \geq 0$$

$$x = \sqrt{y+5}$$

$$y \geq -5$$

$$x \geq 0$$

$$x^2 = y+5$$

$$x \geq 0$$

$$y \geq -5$$

$$y = x^2 - 5$$

$$x \geq 0$$

$$y \geq -5$$

Antw

$$f^{-1}(x) = x^2 - 5 \quad \text{met } x \geq 0$$

⑤

