

Quiz 16

① $f(x) = \sqrt[3]{x-5}$ $g(x) = x^3 + 5$

$$f(g(x)) = f(x^3 + 5) = \sqrt[3]{(\cancel{x^3+5}) - \cancel{5}} =$$

$$\sqrt[3]{x^3} = x \checkmark$$

$$g(f(x)) = g(\sqrt[3]{x-5}) = (\cancel{\sqrt[3]{x-5}})^3 + 5 =$$

$$(\cancel{x-5}) + \cancel{5} = x \checkmark$$

② $y = \frac{2}{4-x}$, so inverse has equation

$$x = \frac{2}{4-y} \Rightarrow x(4-y) = 2 \Rightarrow$$

$$4-y = \frac{2}{x} \Rightarrow \boxed{4 - \frac{2}{x} = y}$$

③

