Practice Questions For Lecture No. 16 to 18

Question 1:

Check whether the following function is injective and surjective or not.

$$y = \frac{3x+2}{x+2}$$

Question 2:

If $f(x) = x^2 - 1$ and $g(x) = 3x + 5$, then find $f \circ g(x)$ and $g \circ f(x)$.

Question 3:

Let $f(x) = \dfrac{-2}{x-5}$ be a real valued function, find $f^{-1}(x)$.

Question 4:

Let $g(x) = (2x - 1)$ be a real valued function, find $g^{-1}(5)$.

Question 5:

Let $f(x) = ax + b$ and $g(x) = cx + d$, where a, b, c and d are constants. Under what condition

$$f \circ g(x) = g \circ f(x)$$
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