

Chapter 01_Assignment

Ex 1: Find the domain of each function:

a/ $f(x) = \sqrt{x+2}$

b/ $f(x) = \frac{1}{x^2 - x}$

c/ $f(x) = \ln(x^2 - 1) - \frac{x}{\sqrt{x-1}}$

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Ex 2: Find the range of each function:

a/ $f(x) = \sqrt{x - 1}$

b/ $f(x) = x^2 - 2x$

c/ $f(x) = \sin(3x - 2)$

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Ex 3: Determine whether is even, odd, or neither

a/ $f(x) = \frac{x}{x^2 + 1}$

b/ $f(x) = \frac{x^2}{x^4 + 1}$

c/ $f(x) = \frac{x}{x + 1}$

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Ex 4: Let $f(x) = \frac{x^2 + x + 1}{x}$. Find:

a/ $f(2x - 1)$

b/ $f\left(x + \frac{1}{x}\right)$

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Ex 5:

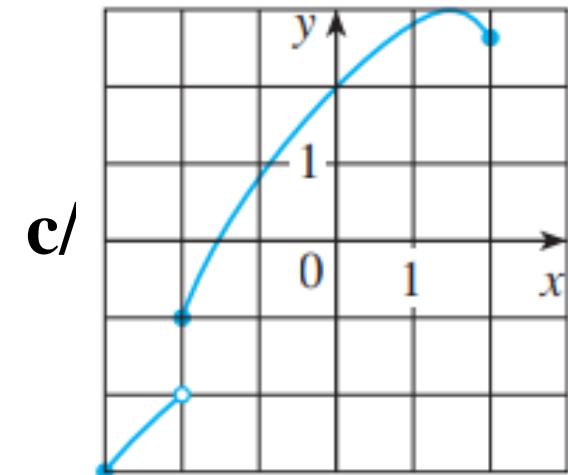
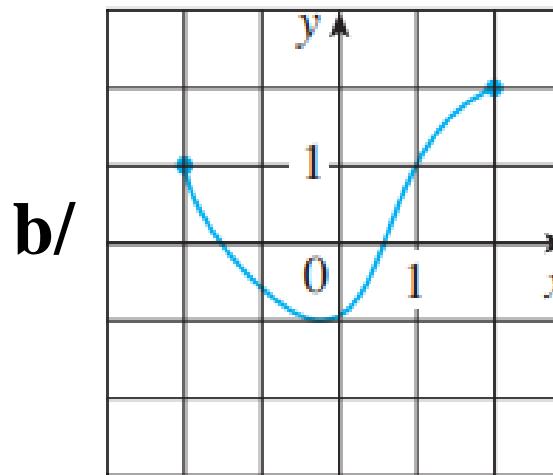
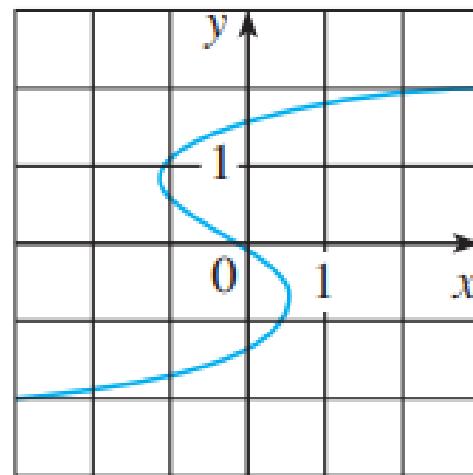
a/ If $f(x) = \frac{x^2 - x}{x - 1}$ and $g(x) = x$ is it true that $f = g$?

b/ Find the domain and sketch the graph of the function
 $y = |2x + 1|$

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Ex 6:

Determine whether the curve is the graph of a function of x .
If it is, state the domain and range of the function.



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Ex 7:

The graphs of f and g are given

a/ State the values of $f(-4), g(3)$.

b/ For what values of x is

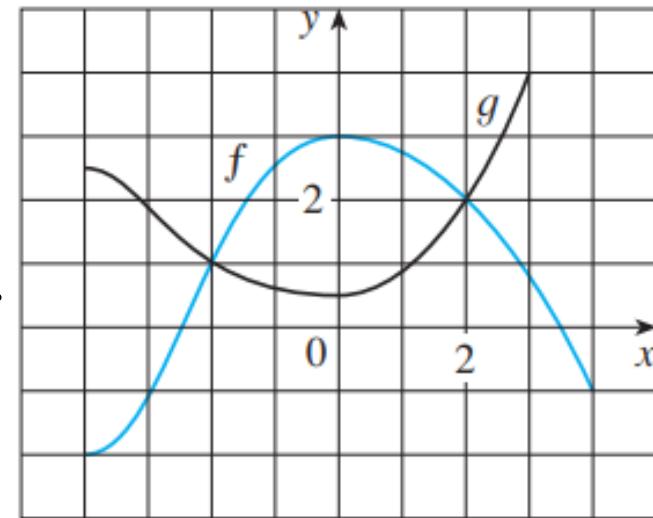
$$f(x) = g(x) ?$$

c/ Estimate the solution of the

$$\text{equation } f(x) = -1 .$$

d/ State the domain and range of f .

e/ State the domain and range of g .



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Ex 8:

Explain how the following graphs are obtained from the graph of $f(x)$:

a/ $f(x - 4)$

b/ $f(x) + 3$

c/ $f(x - 2) - 3$

d/ $f(x + 5) - 4$

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Ex 9:

Suppose that the graph of $f(x) = \sqrt{x}$ is given. Describe how the graph of the function $g(x) = \sqrt{x - 1} + 2$ can be obtained from the graph of $f(x)$