

Name: \_\_\_\_\_

Show work needed to justify your answer.

Date: \_\_\_\_\_

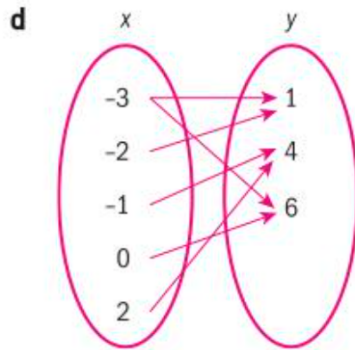
HW: # 4: Math IBSL - Standard 4 - Domain and Range of Functions

5 points

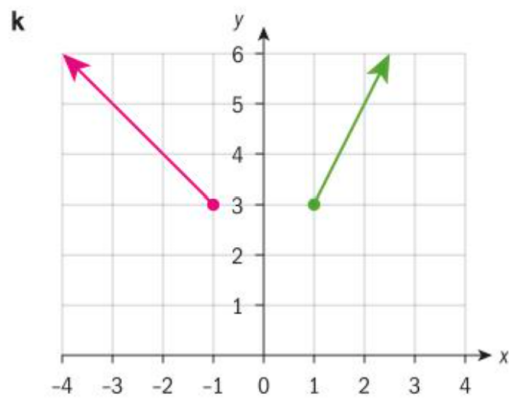
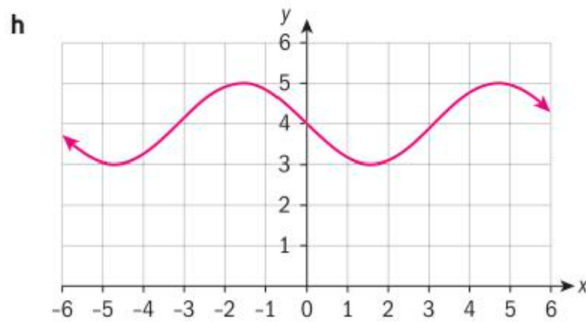
- 1 For each relation below, state whether it is a function or not. If not, state the domain and range.

a

x	6	8	8	12
y	1	6	4	-1



f  $g(x) = -4$



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- 2 Use your GDC to graph the following functions. Sketch the graph and state the domain and range.

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

- 4 Consider the piecewise function

$$f(x) = \begin{cases} \frac{1}{3}x + 2, & 0 \leq x \leq 6 \\ -x + 10, & 6 < x \leq 10 \end{cases}$$

- a Find each value: i  $f(6)$     ii  $f(8)$   
b Sketch the graph of  $f$ .  
c Write down the domain and range of  $f$ .

- 5 Consider the graph of the piecewise function  $y = f(x)$ , where  $-3 \leq x \leq 6$ . Find the equations for the function, including an interval of the domain that applies to each part.

