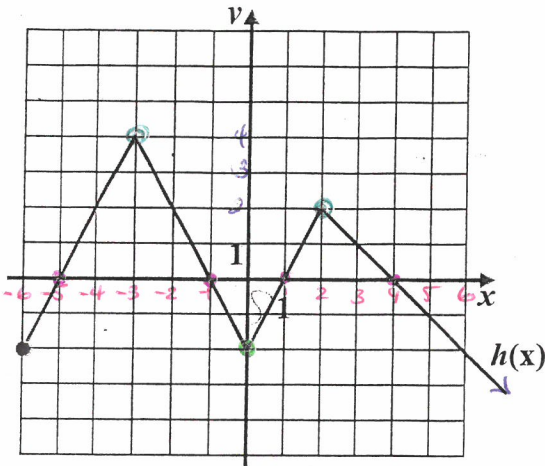


Homework 1

Name: Answer Key Date: _____

Find all the properties of the following functions

3.



dom h : $[-6, +\infty[$

ran h : $]-\infty, 4]$

$h(0) = -2$

$h(x) = 0 \Rightarrow x = -5, -1, 1, 4$

Extreme values – Absolute Minimum: *none*
 Relative Minimum: -2
 Absolute Maximum: 4
 Relative Maximum: 2

Intervals where $h(x)$ is:

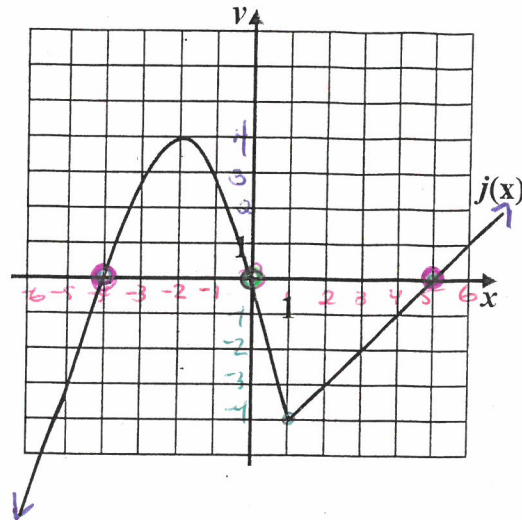
Increasing: $[-6, 3] \cup [0, 2]$

Decreasing: $[-3, 0] \cup [2, +\infty[$

$h(x) \geq 0$: $[-5, -1] \cup [1, 4]$

$h(x) \leq 0$: $[-6, -5] \cup [-1, 1] \cup [4, +\infty[$

4.



dom j : $]-\infty, +\infty[$ OR \mathbb{R}

ran j : $]-\infty, +\infty[$ OR \mathbb{R} .

$j(0) = 0$

$j(x) = 0 \Rightarrow x = -4, 0, 5$

Extreme values – Absolute Minimum: *none*
 Relative Minimum: -4
 Absolute Maximum: *none*
 Relative Maximum: 4

Intervals where $j(x)$ is:

Increasing: $]-\infty, -2] \cup [1, +\infty[$

Decreasing: $[-2, 1]$

$j(x) \geq 0$: $[-4, 0] \cup [5, +\infty[$

$j(x) \leq 0$: $]-\infty, -4] \cup [0, 5]$