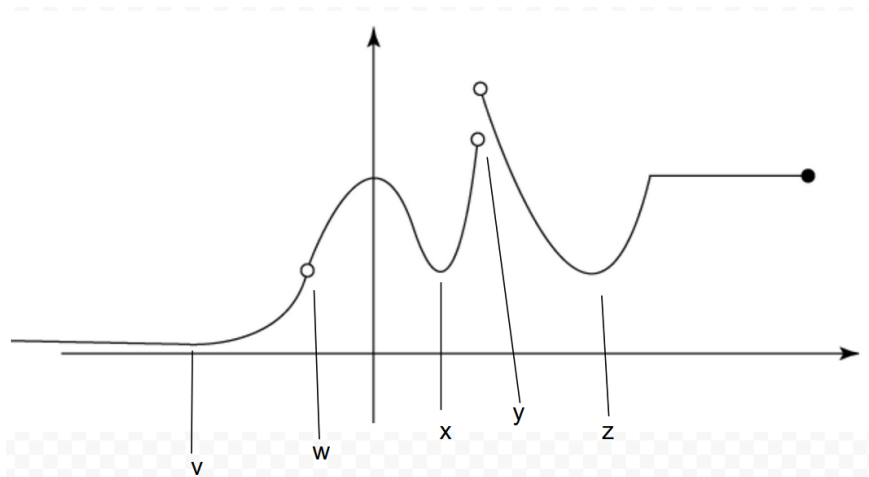# Athabasca University

MATH 265

Assignment 4

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1. a)

The domain of the function g is $(-\infty, w) \cup (w, x) \cup (x, y]$

b) The function g is continuous from $(-\infty, w) \cup (w, x) \cup (x, y]$.

c) The local maximum ix at $x = 0$, since the derivative is 0.

d) The local minimum is at two points, x and z, where the derivative is zero.

e) There is no absolute maximum as the derivative at y is undefined, and y is not included in the domain.

f) The absolute minimum is at v. It appears as though the graph has negative slope as x decreases beyond v to infinity.

2.

3.