**IB Pre HL 2H.2 Modulus Equations and Inequalities**

Warm up:

Solve . Support your answer with sign diagram.

Modulus function (Absolute value function):

Example1) Given  :

a) Sketch the graph:

b) Rewrite  as the piecewise-defined function:

Practice) Given ;

a) Sketch the graph:

b) Rewrite  into the piecewise-defined function.

Example 2) Given 

a) Sketch the graph:

b) Rewrite  as the piecewise-defined function.

Solving Modulus equations:

Example 1) 

Example 2) 

Example 3) 

Solving modulus inequalities:

Example 1: 

Example 2) 