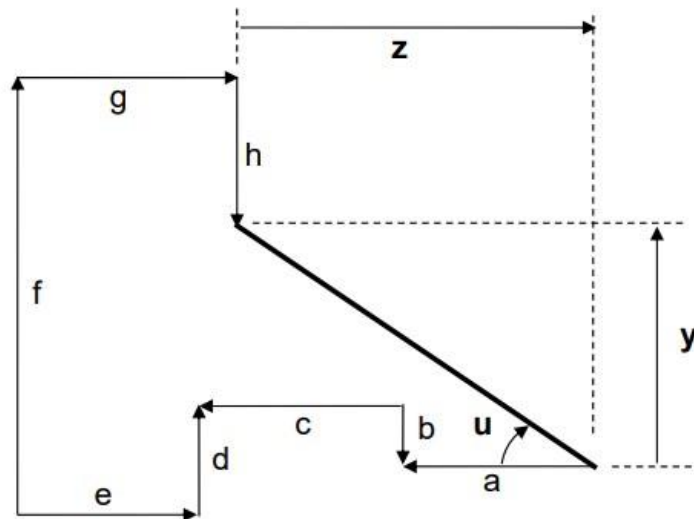# Homework 1
Question 1 (parts a and b); Question 2.

1.   Sign Conventions

The diagram below shows a number of directed distances. Using the <u>sign conventions</u> used in

this class, determine equations for

(a)   the <u>tangent of the angle</u> u and

(b)   <u>the directed distance z</u>

in terms of a, b, c, d, e, f, g, and h.

2.   Fermat's Principle

Use Fermat's principle to derive the law of reflection. Explain, with the use of a diagram, the

sign conventions and reference definitions you use for this problem.