The lines $BH$ and $CL$ are parallel. Refer to the diagram above when answering the questions on this page.

1. [3] TRUE/FALSE: If true, circle T and explain briefly why the statement is true. Otherwise, circle F.

   T  F  $\angle AEB$ has the same measure as $\angle LJK$

   T  F  $\angle AEB$ has the same measure as $\angle DEH$

2. [1] Find a pair of angles that are alternate interior angles.

3. [1] Fill in the blank: If a line $l$ was perpendicular to line $BH$, then $l$ would be \text{____} to $CL$. 
4. Angles $\angle ADB$, $\angle BDC$ and $\angle ABC$ are right angles in the diagram below. Use this diagram to answer the questions below.

(a) [1] Identify two triangles that are similar

(b) [1] Find the length of $BD$

(c) [2] Find the length of $DC$.

5. [2] Write down a conditional statement that is true but has a false converse.

6. [2] Logic, as written by Aristotle in 384 BC (and discussed in class on 1/5), had three rules. Write down one of the rules.

7. [2] What trait about the cult of Pythagorus do you find the most interesting?