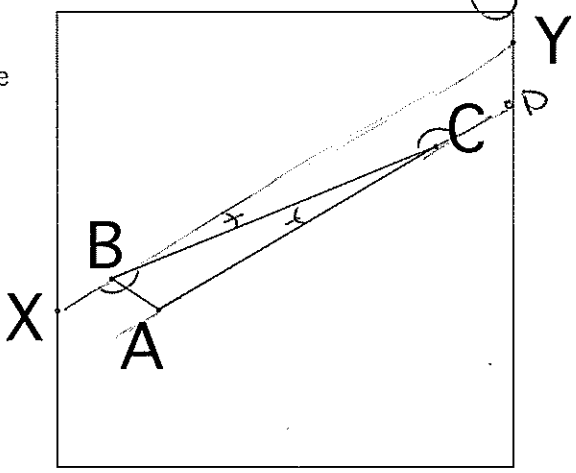
tcore 122: Quiz 3

Key

1. Use the diagram to the right to answer the following questions. Note this diagram is not drawn to scale.



   (a) [1] (Wks #3) Given that $\angle YBC \cong \angle BCA$, what can you conclude about lines $\overline{XY}$ and $\overline{AC}$? (You do not need to justify yourself.)

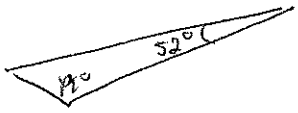
   $\overline{XY} \parallel \overline{AC}$

   (b) [1] (Wks #3) Treat $\overline{BC}$ as a transversal of $\overline{XY}$ and $\overline{AC}$. Identify a pair of alternating interior angles.

   the angles above from (a) work. so do $\angle XYC$ and $\angle DCX$

   (c) [3] (Wks #4) *If* you knew that $\angle BAC \cong 19°$ and $\angle YBC \cong 52°$, find the measure of $\angle ABC$.

   started (+1.5)



   (+1) by (a) $\angle YBC \cong \angle BCA$ so $\angle BCA \cong 52$

   b/c the sum of angles in $\triangle$ add to 180 (+.5)

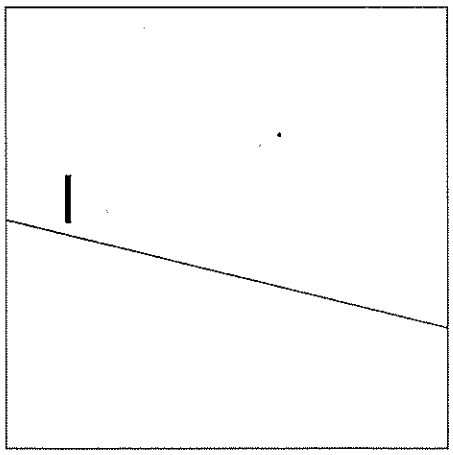
   (+1.5) $19° + 52° + \angle ABC = 180° \Rightarrow \angle ABC = 180° - 71° = 109°$

   (d) [2] Do you trust the measurements quoted above in part (c)? Why or why not? alg (+1.5)

   nope b/c $\angle BAC$ looks bigger than 90° P

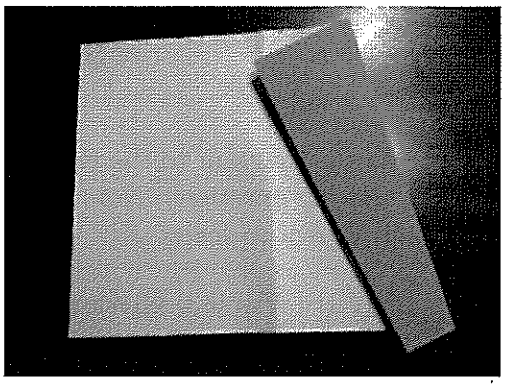
   started (+.5) sense (+1.5) logic (+1)

2. [3] (Wks #4) Outline the process of folding a line perpendicular to l that also passes through the given point.



   (+1.5) started
   (+1) method works
   (+1.5) clear/sense

3. [2] (Lang) The first set of instructions in Chapter 3 produces the following origami model. What did Lang say this was a model of?



an elephant

started (+.5)
knew (+1)
got it (+.5)

4. [2] (Lang) ~~That~~ What is it that makes an origami model inefficient in Lang's view?

"unnecessary layers ...
thick + bulky ...
difficult to fold ...
less aesthetically pleasing ..."

started (+.5)
sense (+.5)
from Lang (+1)

5. [3] (Lang) Justify the following quote found on page 46 of Lang's text:

Generally, the more long points a model has, the smaller the final model will be relative to the size of the square.

The more long points a model has the more paper that needs to be used in connecting the long points. This means the bulk of the paper will be used up in the 'connecting' instead of in the origami 'parts'.

(+1) started
(+1) reasons
(+1) sense/clear

6. [3] (Lang) Name three bases. (Both traditional & standard bases will be accepted.)

Kite Bird Cupboard preliminary
Fish Frog Windmill waterbomb.

(+1) for each