

New HW for Monday! If you weren't in class, you MUST do this sheet AND the following; otherwise JUST do the following (and ignore the assignment sheet): Do 2.6 (p.141) #6&7, 2.7 (p. 144) #1. Then do the following problem:
SP1: Trace a circle (from a CD, glass, whatever). Draw a chord \overline{AB} . Fold A onto B. How is the crease related to the chord? To the circle? Make another chord and fold its endpoints onto each other. What new information do you get?
Then do 2.7 #5, 7 (hint: what kind of quad is formed by the dotted lines?). Finally, do 2.5 (p. 135) #9.

Names: _____

More Proof Practice

1. Consider the statement: *If two supplementary angles are congruent, then they are right angles.*

a. Draw a diagram and set up Given: and Prove:

Given: _____

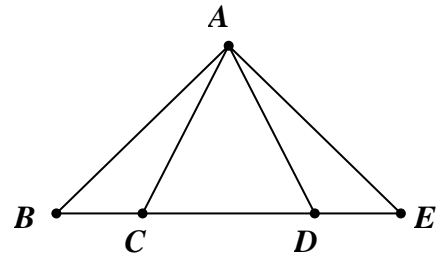
Prove: _____

b. Write a proof (use algebra!)

2. Use a reverse list to help you start writing this proof, then write the actual proof.

Given: $\triangle ACD$ is isosceles; $BC = DE$.

Prove: $\triangle ABE$ is isosceles.



Consider the four statements below:

I. $\triangle ABC$ is isosceles (with $AB = AC$)

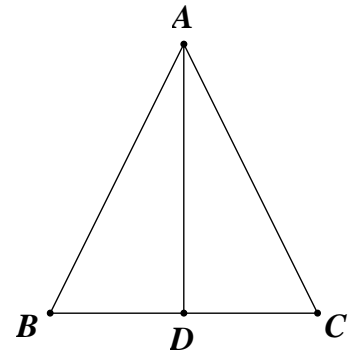
II. \overline{AD} bisects $\angle CAB$

III. \overline{AD} is a median

IV. \overline{AD} is an altitude.

Amazingly enough, any two of these are sufficient to prove the other two: essentially, isosceles triangles are symmetrical.

3. How many different ways are there to pair up the four statements into two “given” and two “prove” statements? For example, **Given:** II and IV; **Prove:** I and III. List each pairing.



4. **Given:** III and IV, **Prove:** I and II (actually write the proof).

5. Pick one of the cases where I was one of the two givens, and do that proof (ie. Given: I & something else; prove the other two statements).