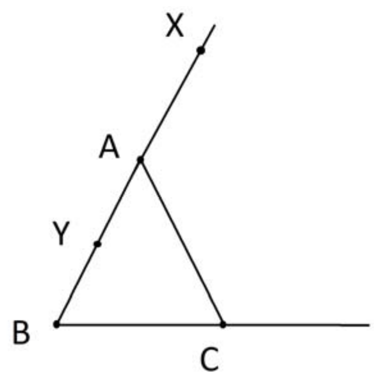
EQUAL AND UNEQUAL ANGLES

RECALL: Note that ***the statement*** **∠ABC = ∠DEF** ***is*** **much stronger** ***than saying the two angles have the same measures*** (in symbols, **|∠ABC| = |∠DEF|**); it means that ***the two angles consist of*** **exactly the same points**.

Consider the following example:



In this drawing **|∠ABC| = |∠ACB|** but the two angles are not equal as sets, so it would be incorrect to write **∠ABC = ∠ACB.** However, the following statements are true (in addition to **∠CBA = ∠ABC**):

∠ABC = ∠XBC = ∠YBC

One can also formulate similar identities using points on the open ray **(BC** as well. For example, if **W** is a point on **(BC** then we also have identities of the form **∠ABC = ∠ABW = ∠XBW = ∠YBW.**