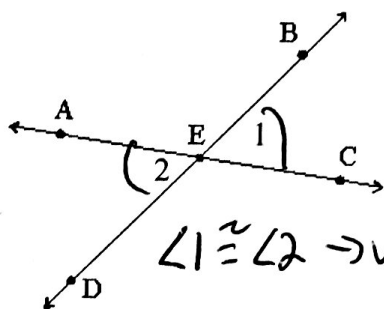


Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Class: \_\_\_\_\_

Geometry  
 Unit 7  
 HW 7-1

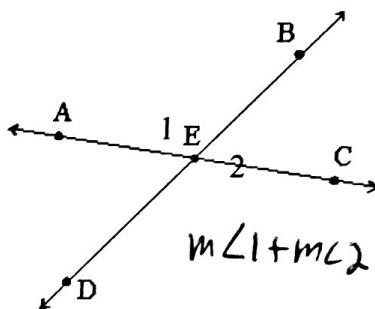
For each diagram use the information from the diagram or given statement to make a new statement with a reason (if angles have numbers in them you should use that to make your statement).

1)



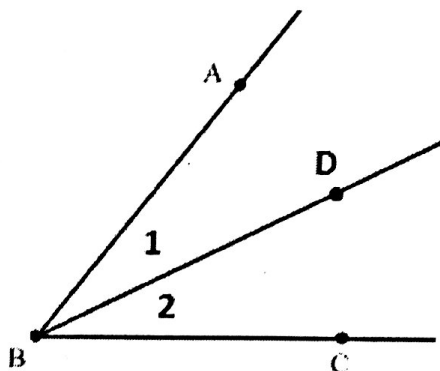
$\angle 1 \cong \angle 2 \rightarrow \text{vert } \angle s \cong$

2)



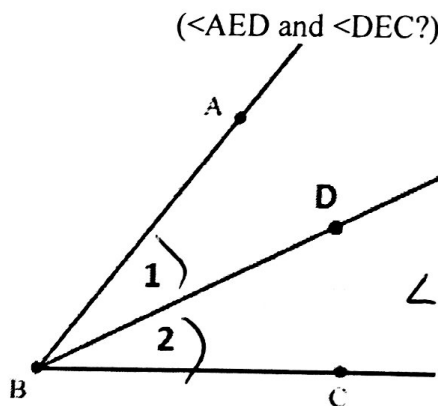
$m\angle 1 + m\angle 2 = 180 \rightarrow \text{lin pair is supp}$

3)



$m\angle 1 + m\angle 2 = m\angle ABC \rightarrow \text{sum of parts} = \text{whole}$

4)

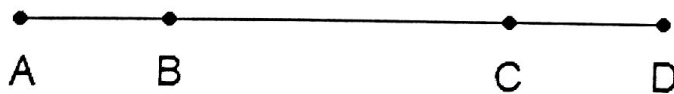


( $\angle AED$  and  $\angle DEC$ ?)

$\angle 1 \cong \angle 2 \rightarrow \text{bisector creates 2 } \cong \text{ parts}$

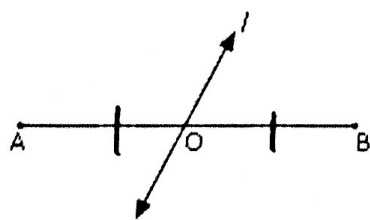
Given:  $\overline{BD}$  bisects  $\angle ABC$

5)



(compare  $\overline{AB}$ ,  $\overline{BC}$ , and  $\overline{AC}$ )  $AB + BC = AC \rightarrow \text{sum of parts} = \text{whole}$

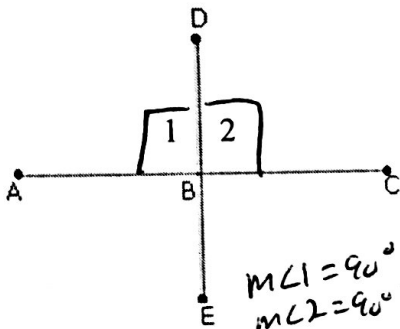
6)



Given:  $\vec{l}$  bisects  $\overline{AB}$

$\overline{AO} \cong \overline{OB} \rightarrow \text{bisector creates 2 } \cong \text{ parts}$

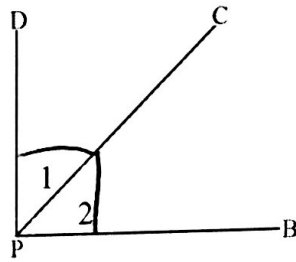
7)



$m\angle 1 = 90^\circ$   
 $m\angle 2 = 90^\circ \rightarrow \perp$  creates  
 rt  $\angle$ s  
 $\angle 1 \cong \angle 2 \rightarrow$  Both are  $90^\circ$

Given:  $\overline{DE} \perp \overline{AC}$

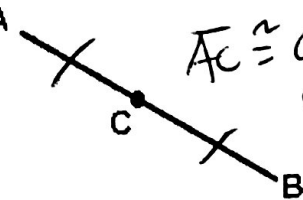
8)



$m\angle 1 + m\angle 2 = 90^\circ \rightarrow \perp$  creates  
 rt  $\angle$ s and sum  
 of parts = whole

Given:  $\overline{DP} \perp \overline{PB}$

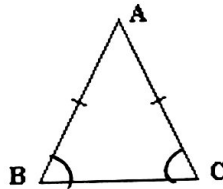
9)



$\overline{AC} \cong \overline{CB} \rightarrow$  Midpt  
 creates 2  $\cong$   
 parts

Given: C is the midpoint of  $\overline{AB}$

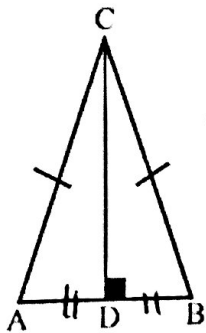
10)



$\angle B \cong \angle C \rightarrow$  base  $\angle$ s of isos  $\Delta$   
 are  $\cong$

Given:  $\Delta ABC$  is isosceles (A is vertex)

11)

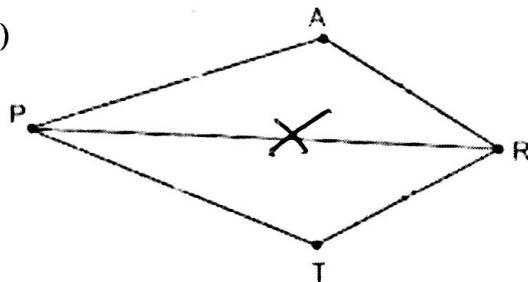


(BD, DA ?)

Given:  $\Delta ABC$  is isosceles (C is vertex)

$\overline{BD} \cong \overline{DA} \rightarrow$  alt of isos  $\Delta$  splits  
 base in 2  $\cong$  parts

12)



(Shared piece?)

$\overline{PT} \cong \overline{PR} \rightarrow$  any thing  $\cong$  to  
 itself