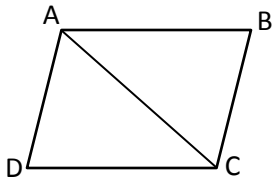
Geometry

Unit One B: Two-Column Proofs #4 (HW17)

Name: _____

Date: _____ Period: _____

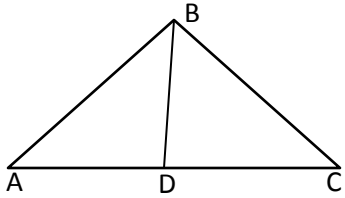
1. Given: $\overline{AB} \cong \overline{CD}$; $\angle CAB \cong \angle ACD$



Prove: $\angle B \cong \angle D$

Statements	Reasons
1. $\overline{AB} \cong \overline{CD}$	1.
2.	2. Given
3.	3.
4. $\Delta ADC \cong$ _____	4.
5.	5.

2. Given: ΔABC is isosceles with base $\overline{AC}$;
D is the midpoint of $\overline{AC}$



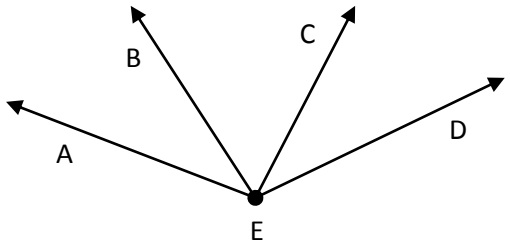
Prove: $\overline{BD}$ bisects $\angle ABC$

Statements	Reasons
1. ΔABC is isosceles with base $\overline{AC}$	1.
2.	2.
3.	3. Given
4.	4.
5.	5.
6.	6. SSS
7.	7. CPCTC
8. $\overline{BD}$ bisects $\angle ABC$	8.

For #3-5, use the diagram at the right to solve for the requested measure.

3. Given: $\angle AEB \cong \angle CED$; $m\angle AEB = 4(x+2)$; $m\angle BEC = 12x - 1$; $m\angle AEC = 5(5x-4)$

   Find $m\angle BED$.



4. Given: $\angle AEC \cong \angle BED$; $m\angle BEC = 7x + 14$; $m\angle BED = 19x + 25$; $m\angle CED = 2x + 56$

   Find $m\angle AEB$.

5. Given: $\overrightarrow{EC}$ bisects $\angle BED$; $m\angle BEC = 5x + 9$; $m\angle CED = 3x + 12$

   Find $m\angle CED$.