Name:_____Due Date:_____ Section: _____

GEOMETRY+ LAB - 2016   **Cumulative Review #2 (CH 1 & 2)**
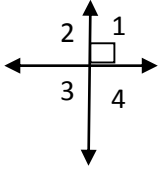
PART I: Write the answer of your choice in the space provided. Provide work that justifies your choice.

_____1. What reason(s) can be used to prove $<1 \cong <3$ based on the given diagram

Given :

A.   All right angles are congruent
B. *vertical angles are congruent*
C. *Choices A & B*
D. *<1 and <3 are a linear pair*

Work Space for Justification

_____2. What is the midpoint of a segment with endpoints   (6, -2) and (8, 4)?

      A. $(2,-1)$

      B. $(7,1)$

      C. $(-2,5)$

      D. $(-2,-3)$

_____3. In which diagram does $AB + BC = AC$?

    A.

    B.

    C.

    D.

_____4. The measure of an angle is 12 less than twice the measure of it's
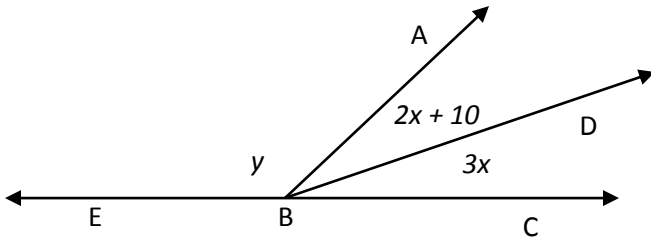   supplement. What is the measure of the angle?
        A.   28
        B.   34
        C.   64
        D.   116

_____5. . Given $A(4,-1)$ and $B(7,-5)$, what is AB ?

    A.   25
    B.   5
    C. $\sqrt{5}$
    D.   10

Part II: For the question in this part, you must SHOW ALL WORK. The question is worth 4 credits. If only a solution is given with no work, only 1 credit will be given.
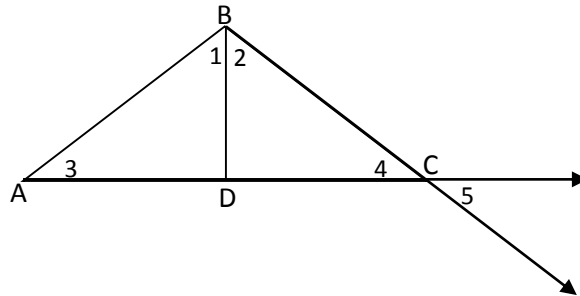
11. Given: $\overrightarrow{BD}$ bisects $< ABC$; $\overleftrightarrow{EBC}$. Solve for *x and y*.

12. Complete the following proof by writing the reason that supports each statement.

Given: $\overline{BD}$ bisects $\measuredangle ABC$
$\measuredangle 3$ is complementary to $\measuredangle 1$
$\measuredangle 4$ is complementary to $\measuredangle 2$

Prove: $\measuredangle 3 \cong \measuredangle 5$

Statements	Reasons
$\overline{BD}$ bisects $\measuredangle ABC$ 1.	1.
2. $\measuredangle 1 \cong \measuredangle 2$	2.
3. $\measuredangle 3$ is complementary to $\measuredangle 1$ $\measuredangle 4$ is complementary to $\measuredangle 2$	3.
4. $\measuredangle 3 \cong \measuredangle 4$	4.
5. $\measuredangle 4$ and $\measuredangle 5$ are vertical angles	5.
6. $\measuredangle 4 \cong \measuredangle 5$	6.
7. $\measuredangle 3 \cong \measuredangle 5$	7.