Warm Up

1.) Find a point between A(-3, 5) and B(7, 5).

2.) Find the averages of -11 & 5, and 16, -4, & 6.

3.) Solve $\frac{x + 7}{2} = 5$

4.) Solve $\frac{2x + 4}{2} = 3$

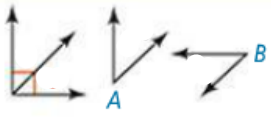
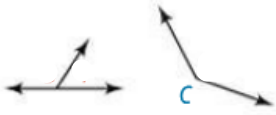
1-5: Exploring Angle Pairs

Obj - SWBAT identify special angle pairs and use their relationships to find angle measures.

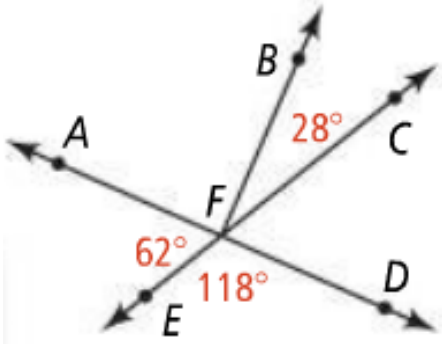
Vocabulary

take note

Key Concept Types of Angle Pairs

Definition	Example
Adjacent angles	
Vertical angles	
Complementary angles	
Supplementary angles	

Ex. 1: Use the diagram. Are <AFE and <CFD vertical angles? Explain.



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Concept Summary **Finding Information From a Diagram**

There are some relationships you can assume to be true from a diagram that has no marks or measures. There are other relationships you cannot assume directly. For example, you *can* conclude the following from an unmarked diagram.

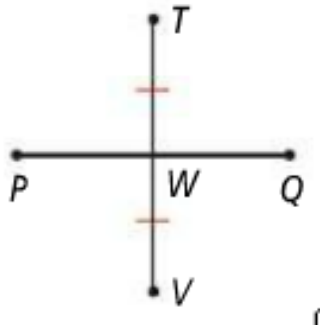
- Angles are adjacent.
- Angles are adjacent and supplementary.
- Angles are vertical angles.

You *cannot* conclude the following from an unmarked diagram.

- Angles or segments are congruent.
- An angle is a right angle.
- Angles are complementary.

Ex. 2: Can you conclude the following statements from the diagram? Explain.

a.) $\overline{TW}$ $\overline{WV}$



b.) $\overline{PW}$ $\overline{WQ}$

c.) <TWQ is a right angle

d.) $\overline{TV}$ bisects $\overline{PQ}$

homework

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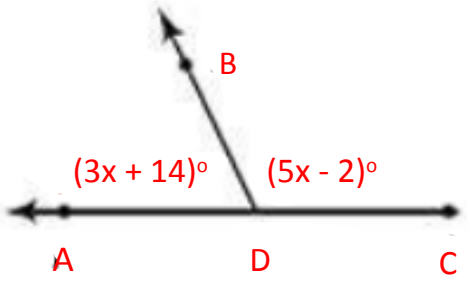
Postulate 1-9 Linear Pair Postulate

If two angles form a linear pair, then they are supplementary.

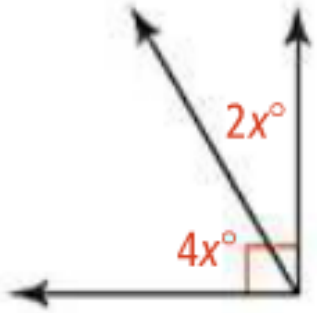
Ex. 3: <ADB and <BDC are a linear pair. m<ADB = 3x + 14, and m<BDC = 5x - 2. What are m<ADB and M<BDC?



Ex. 4: $\overrightarrow{KM}$ bisects <JKL. If m<JKL = 72, what is m<JKM? Write a justification for each step.

Ex. 5: Your friend calculated the value of x below. What was her error? Correct her work and answer.

$$4x + 2x = 180$$
$$6x = 180$$
$$x = 30$$



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