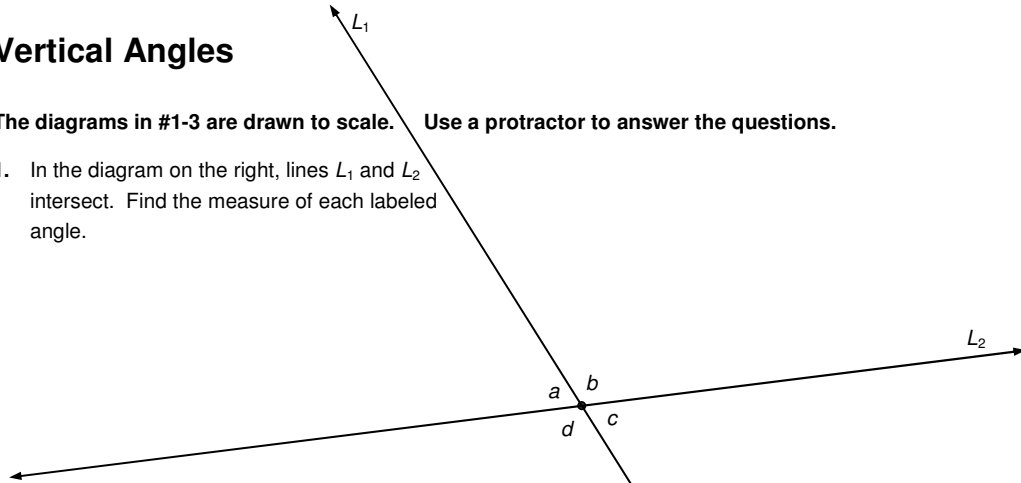


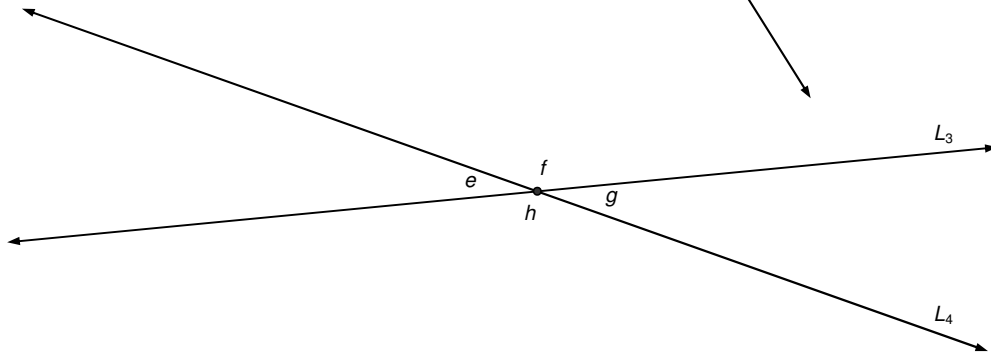
Vertical Angles

The diagrams in #1-3 are drawn to scale. Use a protractor to answer the questions.

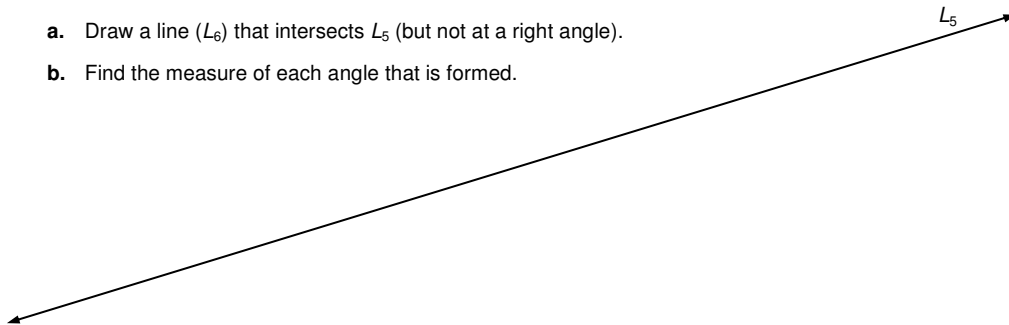
- In the diagram on the right, lines L_1 and L_2 intersect. Find the measure of each labeled angle.



- In the diagram on the right, lines L_3 and L_4 intersect. Find the measure of each labeled angle.



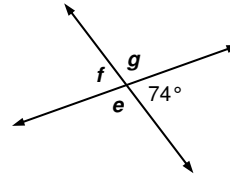
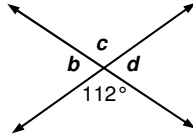
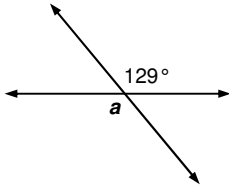
- Use line L_5 to answer the following.
 - Draw a line (L_6) that intersects L_5 (but not at a right angle).
 - Find the measure of each angle that is formed.



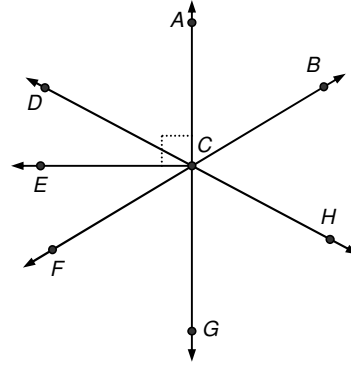
- The angles directly across from one another are called **vertical angles**. What do you notice about the measures of the vertical angles in each situation?

BONUS: How could you prove it without using a protractor? (*Hint: think supplementary angles!*)

5. Find each of the unknown angle measures without a protractor.



6. In the diagram on the right, \overleftrightarrow{AC} , \overleftrightarrow{BF} , and \overleftrightarrow{DH} are straight lines. Use the diagram to answer the following.



- a. Name the angle complementary to $\angle DCE$
- b. $\angle ACB$ and which angle are vertical angles?
- c. Name two angles supplementary to $\angle DCB$
- d. Name the angle complementary to $\angle FCG$
- e. $\angle DCB$ and which angle are vertical angles?
- f. Name the angle supplementary to $\angle ECB$

7. Find each of the unknown angle measures without a protractor.

