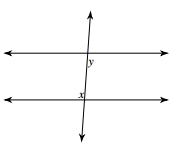
Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class Date:

PART 1: *Match each word with its definition from the bank below:*

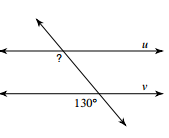
|  |  |
| --- | --- |
| Definition | Word |
| 1. Two angles whose sum measures 90˚ |  |
| 1. Angles that are directly opposite each other at two intersecting lines. These angles are congruent. |  |
| 1. Angles that are on the inside of two parallel lines cut by a transversal, and are located on opposite sides of the transversal line. These angles are congruent. |  |
| 1. Angles which are directly next to each other. |  |
| 1. Congruent angles that are created where a transversal crosses two other parallel lines. These angles, one exterior and one interior, are located in the same place at each intersection and on the same side of the transversal. |  |
| 1. Lines that lie in the same plane and remain the same distance apart. These lines will never touch. |  |
| 1. A line that cuts two parallel lines. |  |

Word Bank:

|  |  |  |
| --- | --- | --- |
| 1. Adjacent 2. Transversal 3. Vertical | 1. Alternate Interior 2. Supplementary 3. Complementary | 1. Parallel Lines 2. Alternate Exterior 3. Corresponding |

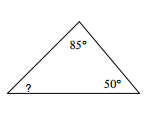
Identify the angle relationship in each figure:

|  |  |
| --- | --- |
| 8.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 9.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 10.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 11.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 12.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 13.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

14. ***What is the measure of the angle marked with the question mark?*** Explain how you found your answer.

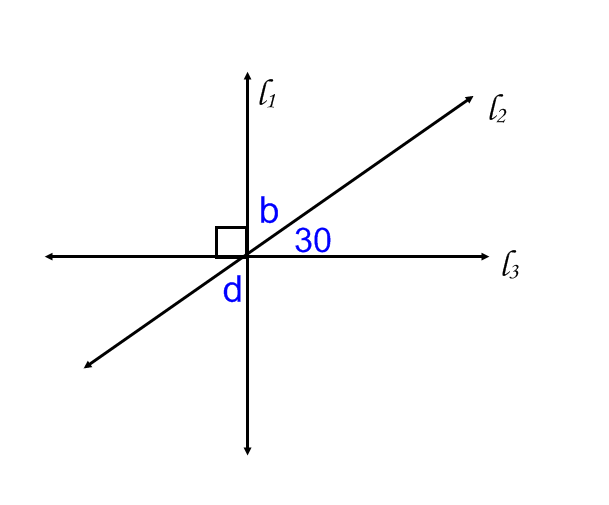
\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. In a given triangle, the measures of two of the interior angles are given. ***What is the measure of the third unidentified angle?***

Answer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Show your work:***

1. Cindy told her teacher that, in the picture to the right, the measure of ***angle b*** was 60° and the measure of ***angle d*** was 30°. ***Critique Cindy’s response using your knowledge of angle relationships.***

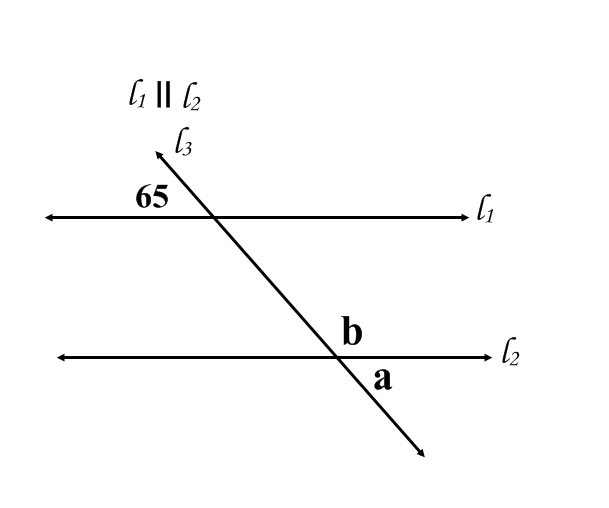
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. ***What are the measures of angles a and b in the figure to the left? Explain below how you determined your answer.***

m<a = \_\_\_\_\_\_\_\_\_\_ m<b = \_\_\_\_\_\_\_\_\_\_\_\_

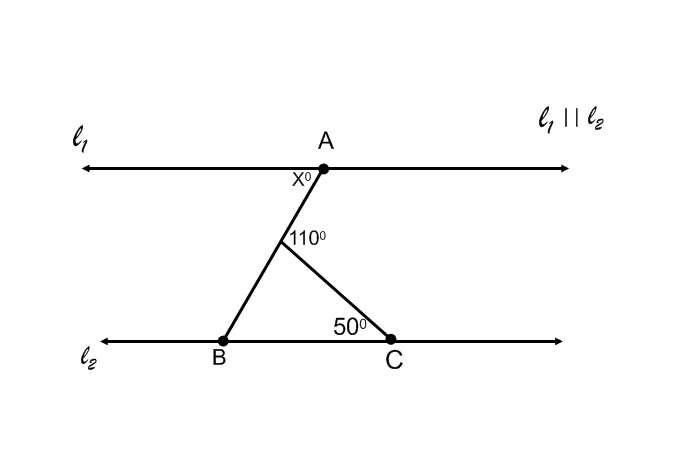
Explain:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

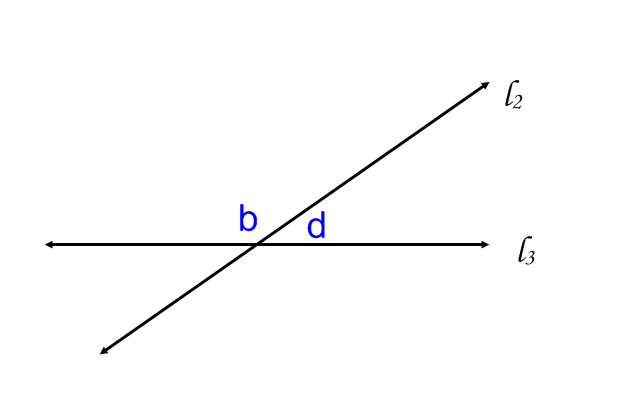
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. Given the information in the figure to the right, ***find the value of x.***

Show your work:

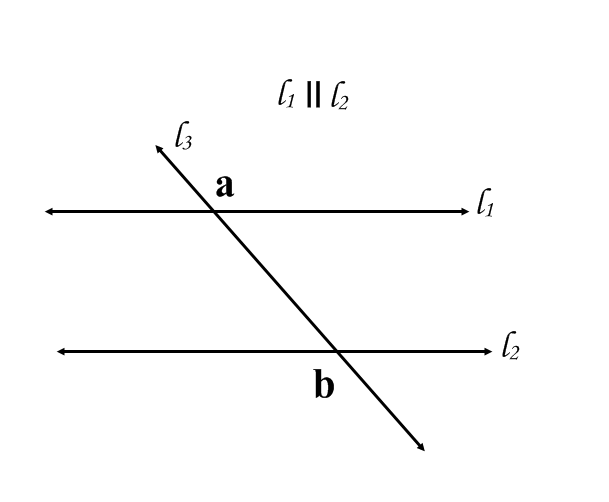
X = \_\_\_\_\_\_ °

1.  m∟b = (3x + 40)º

m∟d = 2(x + 20)º

***What is the measure of angles b and d? Show your work:***

**ANSWER:**

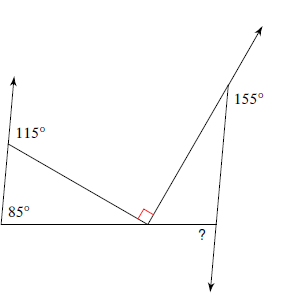


1. What is the measure ***of angle b in degrees***? *Show your work!*

m∟a = (5x – 10) º

m∟b = 2 (x + 40)º

**ANSWER:**

***Challenge:*** *Find the angle measure in degrees of the angle labeled with the question mark in the figure.*