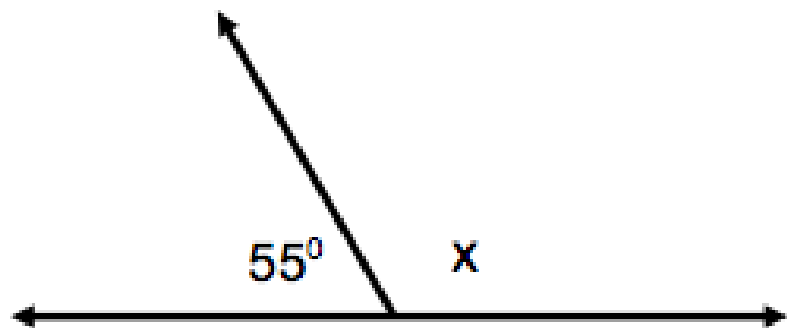


Angle and Line Relationships (11-1) Day 1 Examples

Classify each pair of angles and then solve for x .

1)

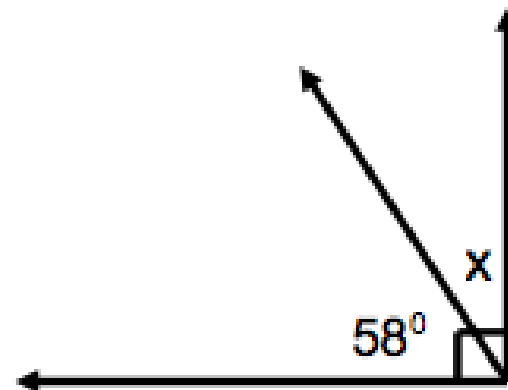


Supplementary Angles

$$x + 55 = 180 \quad \text{or} \quad 180 - 55 = x$$

$$x = 125^\circ$$

2)



Complementary Angles

$$x + 58 = 90 \quad \text{or} \quad 90 - 58 = x$$

$$x = 32^\circ$$

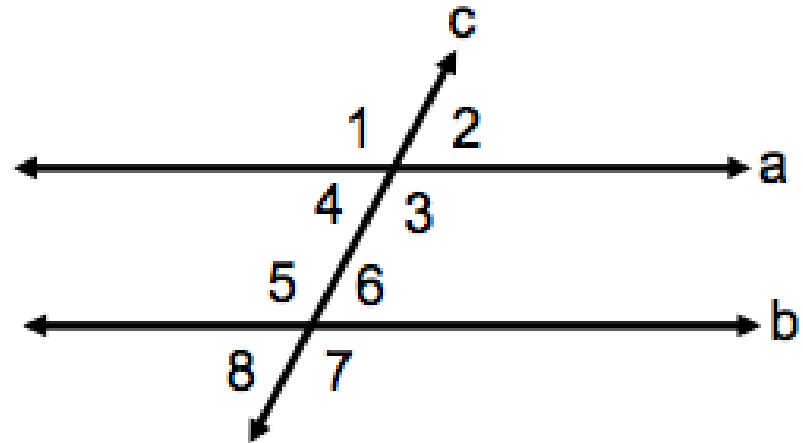
Use the diagram to answer the following:

Given information:

Line a and line b are parallel lines.

Line c is a transversal line.

$m\angle 2$ is 65° .



1) List one pair of vertical angles.

Angles 1 and 3, 2 and 4, 5 and 7, 6 and 8.

2) List one pair of adjacent angles.

1 and 2, 2 and 3, 3 and 4, 4 and 1, 5 and 6, 6 and 7, 7 and 8, 8 and 5.

3) List the pairs of alternate interior angles.

3 and 5, 4 and 6

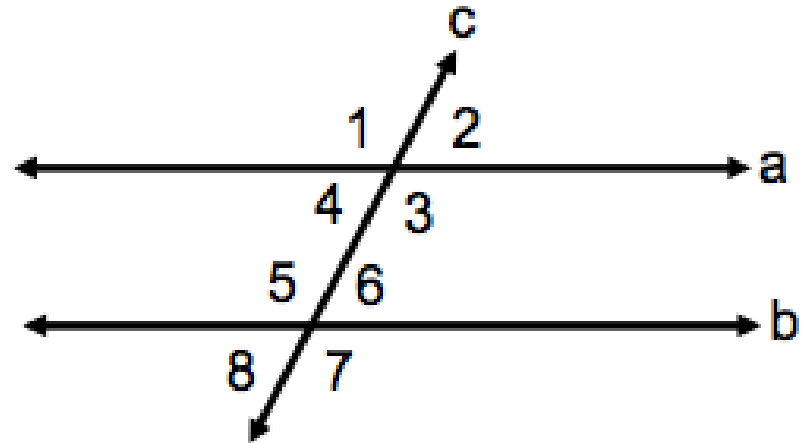
Use the diagram to answer the following:

Given information:

Line a and line b are parallel lines.

Line c is a transversal line.

$m\angle 2$ is 65° .



4) List the pairs of alternate **exterior** angles.

1 and 7, 2 and 8

5) List all of the pairs of corresponding angles.

1 and 5, 2 and 6, 3 and 7, 4 and 8

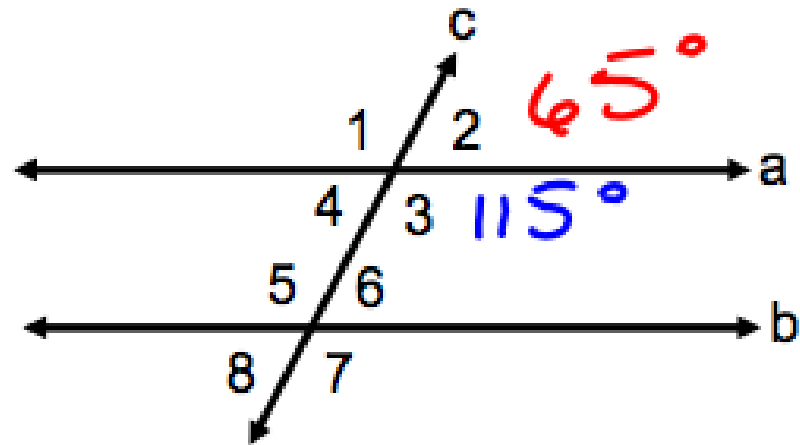
Use the diagram to answer the following:

Given information:

Line a and line b are parallel lines.

Line c is a transversal line.

$m\angle 2$ is 65° .



6) Find the $m\angle 3$. Explain the reasoning.

115° ; supplementary angle to angle 2.

$$180 - 65 = 115^\circ$$

7) Find the $m\angle 5$. Explain the reasoning.

115° ; alternate interior angle with angle 3.

8) Find the $m\angle 8$. Explain the reasoning.

65° ; alternate exterior angle with angle 2
or supplementary angle with angle 5.