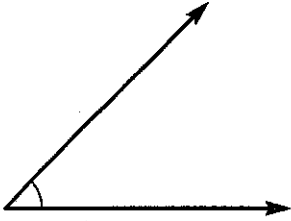
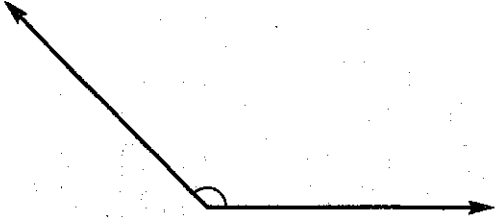
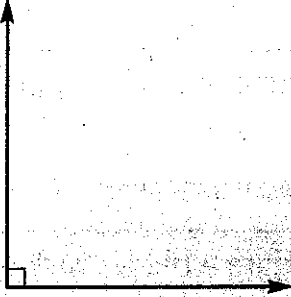



Standard 7.G.5 (L)

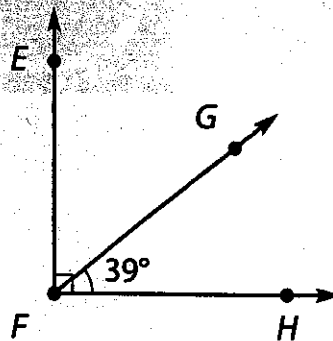
Complementary & Supplementary Angles

Let's review some of what you have already learned about angles.

<p>Acute angles measure less than 90°.</p> 	<p>Obtuse angles measure more than 90°.</p> 
<p>Right angles measure 90°. A small square at the vertex indicates that the angle is a right angle.</p> 	<p>Straight angles measure 180°. Straight angles are straight lines.</p> 

Complementary Angles

The diagram below shows three angles, $\angle EFG$, $\angle GFH$, and $\angle EFH$. $\angle EFH$ is a right angle.



We know that $\angle EFH = 90^\circ$. Angles $\angle EFG$ and $\angle GFH$ are complementary angles. Two angles are **complementary angles** when they add up to 90° .

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Since we know that $\angle GFH = 39^\circ$ and the sum of $\angle EFG$ and $\angle GFH$ is 90° , we can write and solve an equation to find the measure of $\angle EFG$.

$$x + 39^\circ = 90^\circ$$

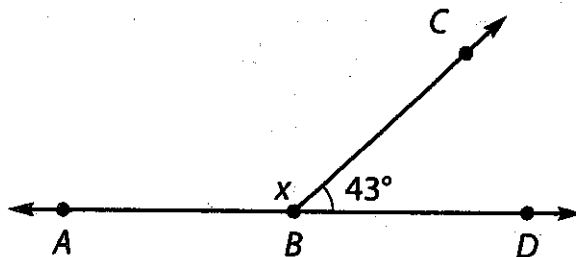
$$x + 39^\circ - 39^\circ = 90^\circ - 39^\circ$$

$$x = 51^\circ$$

The measure of $\angle EFG$ is 51° .

Supplementary Angles

The diagram below shows three angles, $\angle ABC$, $\angle CBD$, and $\angle ABD$. $\angle ABD$ is a straight angle.



We know that $\angle ABD = 180^\circ$ and $\angle CBD = 43^\circ$. Angles $\angle ABC$ and $\angle CBD$ are supplementary angles. Two angles are **supplementary angles** when they add up to 180° .

On Your Own: Write and solve an equation to find the measure of $\angle ABC$.

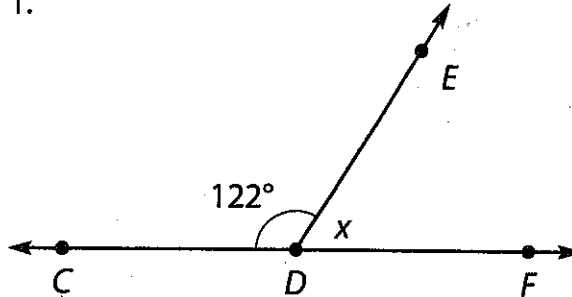
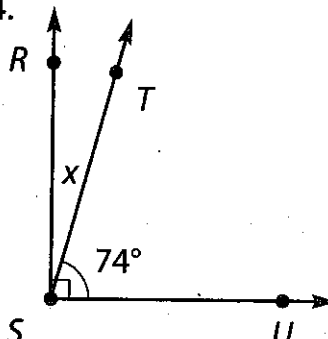
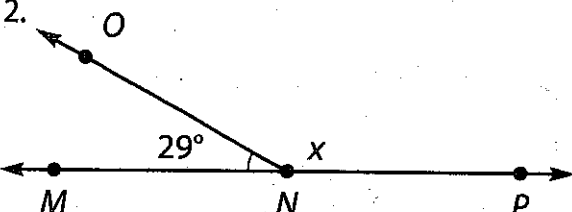
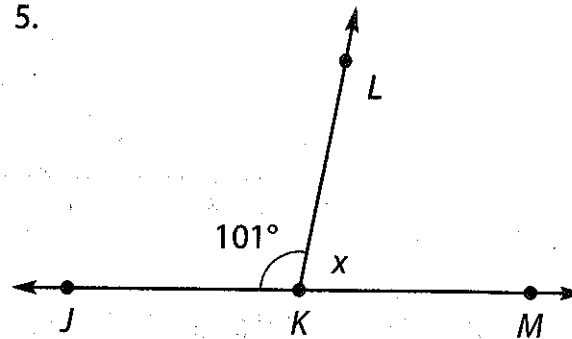
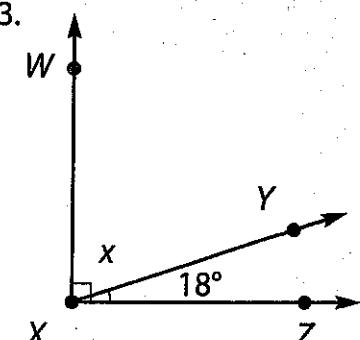
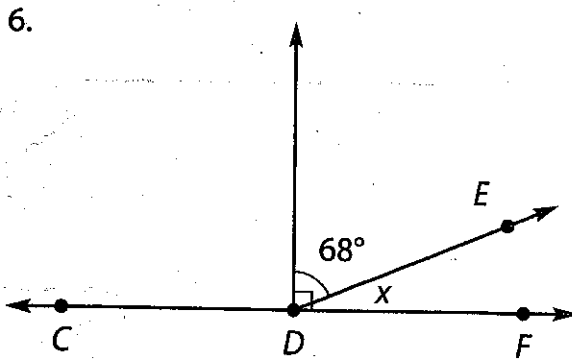
Equation: _____

$\angle ABC =$ _____

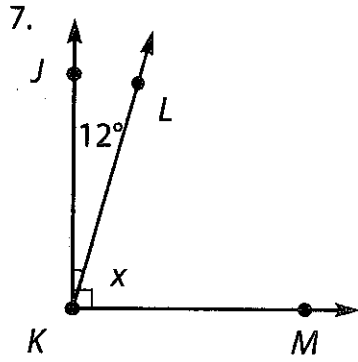
Standard 7.G.5 (M)

Angle Partners

Directions: Write and solve an equation to find x , the measure of the missing angle in each diagram below.

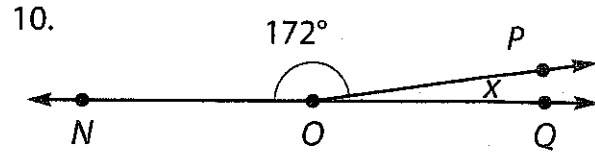
<p>1.</p>  <p>Equation: _____</p> <p>$\angle x =$ _____</p>	<p>4.</p>  <p>Equation: _____</p> <p>$\angle x =$ _____</p>
<p>2.</p>  <p>Equation: _____</p> <p>$\angle x =$ _____</p>	<p>5.</p>  <p>Equation: _____</p> <p>$\angle x =$ _____</p>
<p>3.</p>  <p>Equation: _____</p> <p>$\angle x =$ _____</p>	<p>6.</p>  <p>Equation: _____</p> <p>$\angle x =$ _____</p>

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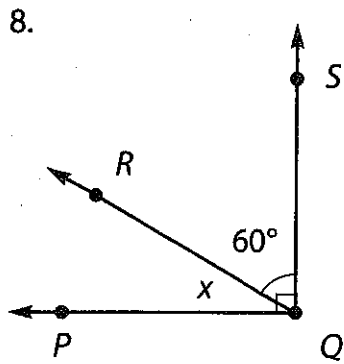
Equation: _____

$\angle x =$ _____



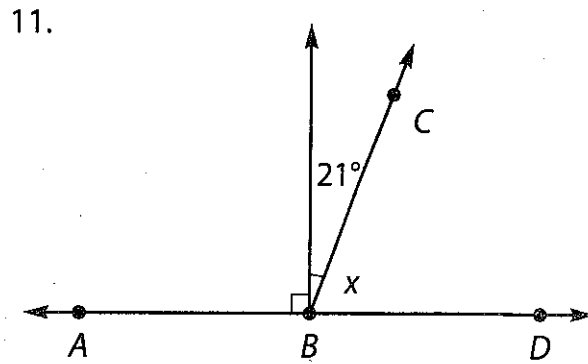
Equation: _____

$\angle x =$ _____



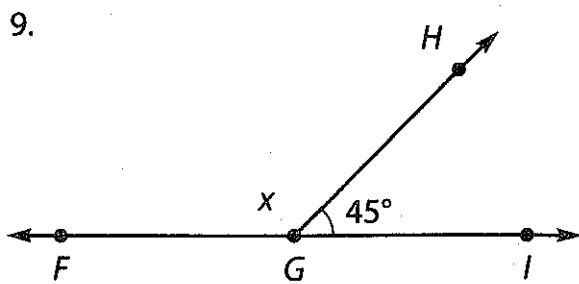
Equation: _____

$\angle x =$ _____



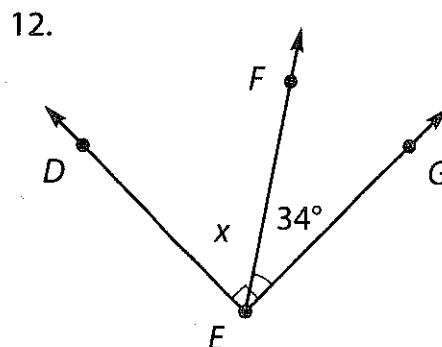
Equation: _____

$\angle x =$ _____



Equation: _____

$\angle x =$ _____

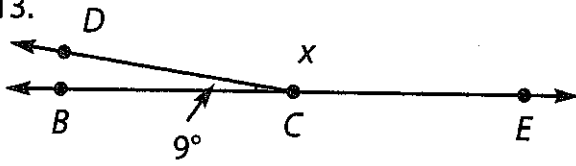


Equation: _____

$\angle x =$ _____

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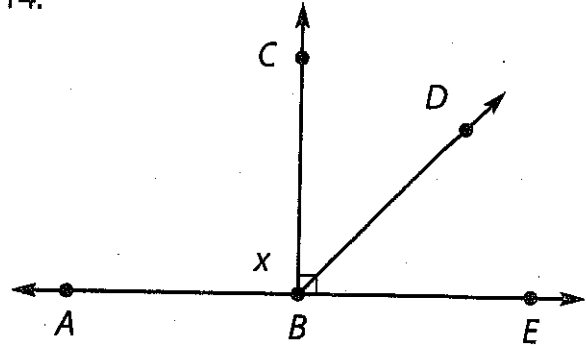
13.



Equation: _____

$\angle X =$ _____

14.



Equation: _____

$\angle X =$ _____