



**Math Virtual Learning**

# **Math 7/Pre-Algebra**

**Complementary and Supplementary Angles**

**April 15, 2020**



# Grade 7/Complementary and Supplementary Angles

## Lesson: April 15, 2020

### **Objective/Learning Target:**

Students will solve problems involving complementary and supplementary angles.

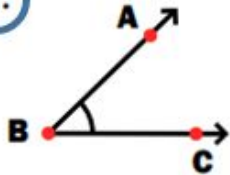
### **Let's Get Started:**

Click on the Link: [Complementary and Supplementary Angles](#)

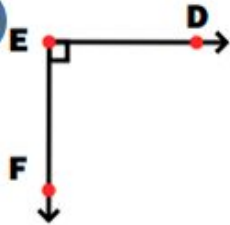
# Warm-Up

On your paper, sort the following angles into the correct location based on the size of the angle.

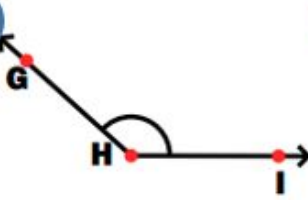
1.



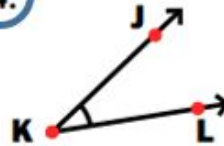
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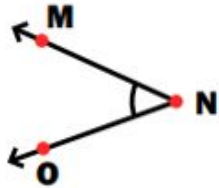
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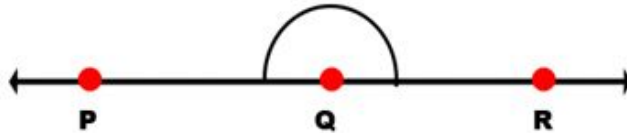
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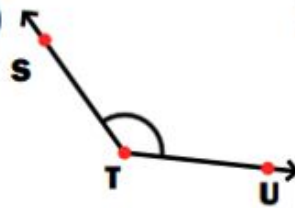
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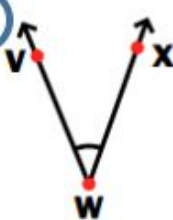
6.



7.



8.



9.

$87^\circ$

10.

$132^\circ$

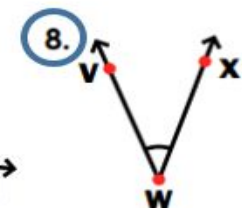
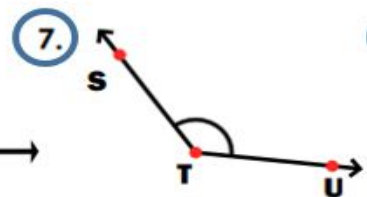
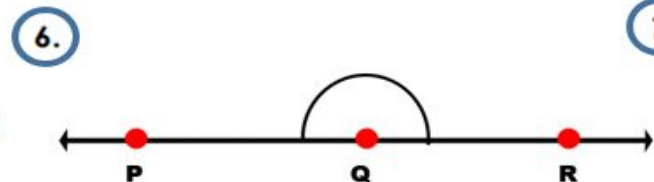
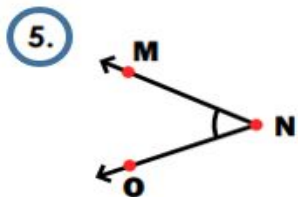
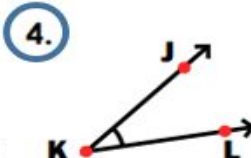
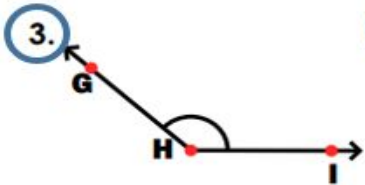
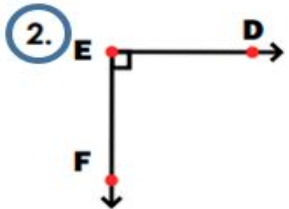
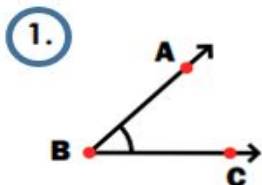
Acute Angle  
(smaller than  $90^\circ$ )

Right Angle  
(EXACTLY  $90^\circ$  - a square corner)

Obtuse Angle  
(bigger than  $90^\circ$ )

Straight Angle  
(EXACTLY  $180^\circ$  - a straight line)

# Warm-Up - Answer Key



9.  $87^\circ$

10.  $132^\circ$

Acute Angle  
(smaller than  $90^\circ$ )

Right Angle  
(EXACTLY  $90^\circ$  - a square corner)

Obtuse Angle  
(bigger than  $90^\circ$ )

Straight Angle  
(EXACTLY  $180^\circ$  - a straight line)

#1      #4  
#5      #8  
#9

#2

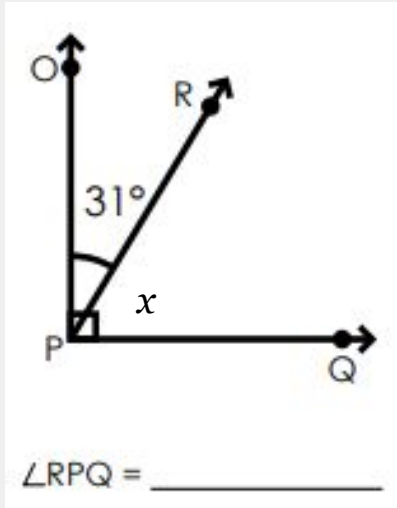
#3  
#7  
#10

#6

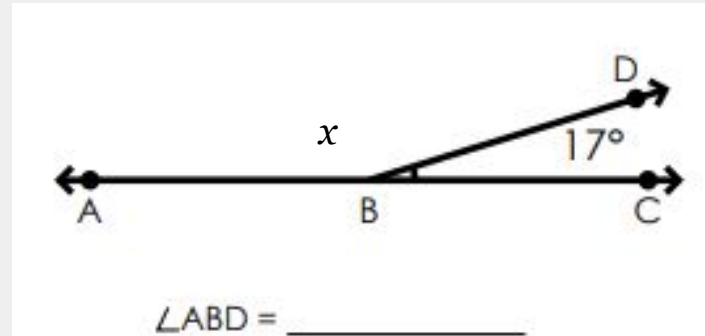
# Practice

Answer the questions on a piece of paper.

The two angles are complementary.  
Find the complement of the given angle.

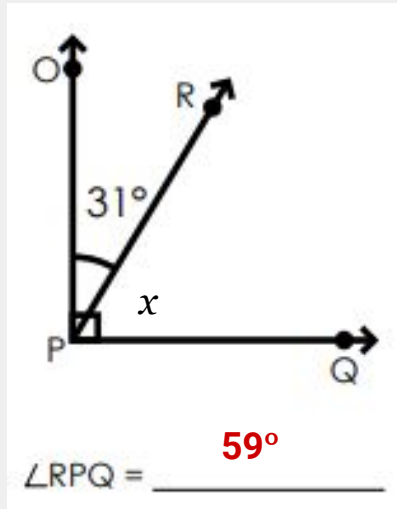


The two angles are supplementary.  
Find the supplement of the given angle.



# Practice Answers

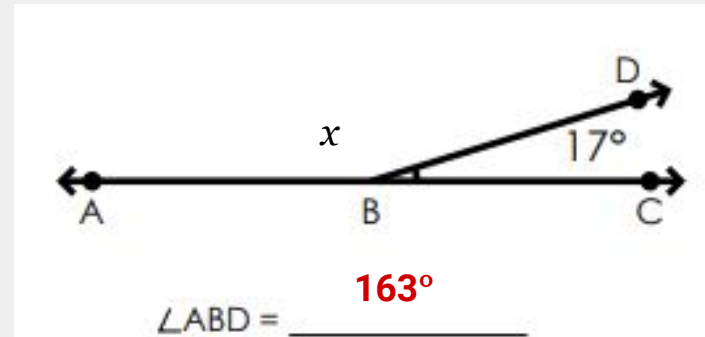
The two angles are complementary.  
Find the complement of the given angle.



$$x + 31^\circ = 90^\circ$$

$$\text{OR } 90^\circ - 31^\circ = 59^\circ$$

The two angles are supplementary.  
Find the supplement of the given angle.



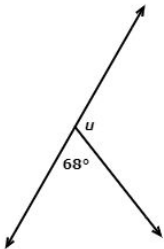
$$x + 17^\circ = 180^\circ$$

$$\text{OR } 180^\circ - 17^\circ = 163^\circ$$

# Additional Practice

The screenshot shows the IXL website interface. At the top, there is a search bar with the text "Search topics and skills" and a magnifying glass icon, and a "Username" input field. Below the search bar is a green navigation bar with three tabs: "Learning", "Diagnostic", and "Analytics". Underneath the navigation bar, there are several icons representing different subjects: "Recommendations", "Skill plans", "Math" (highlighted with a blue underline), "Language arts", "Science", and "Social stud". At the bottom of the screenshot, there is a breadcrumb trail: "Geometry > C.4 Find measures of complementary, supplementary, vertical, and adjacent angles VZU".

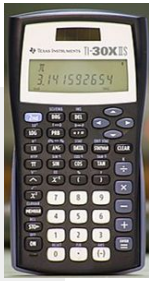
What is the value of  $u$ ?



Submit

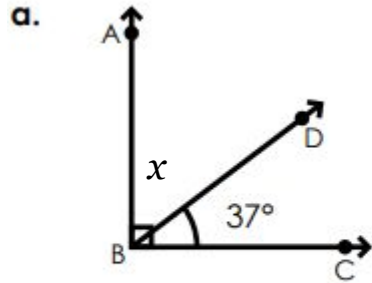
- ❑ Click on the Link: [IXL - Find the measure of the missing angle](#)
- ❑ Find the measures of each angle on your own paper then type your answer in the box provided.
- ❑ Remember that supplementary angles are equal to  $180^\circ$  and complementary angles are equal to  $90^\circ$ .

# Practice: Answer the questions on a piece of paper.

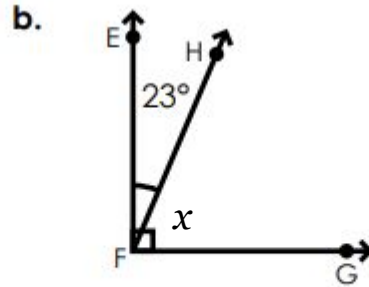


You may want to use a calculator.

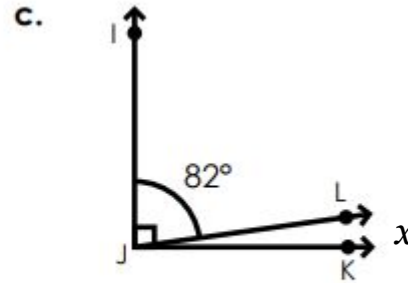
In practice a, b, and c, the two angles are complementary. Find the complement of the given angle.



$\angle ABD = \underline{\hspace{2cm}}$

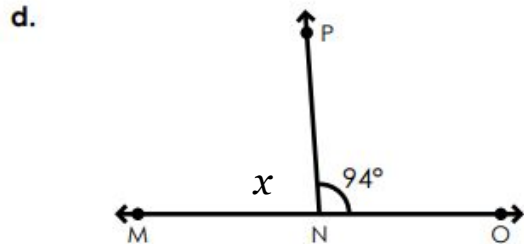


$\angle HFG = \underline{\hspace{2cm}}$

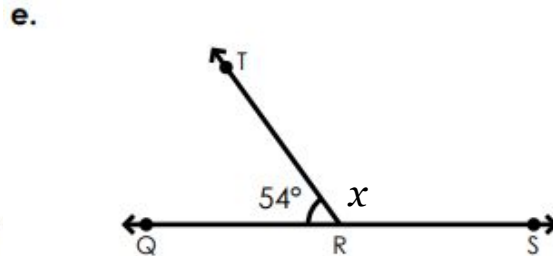


$\angle LJK = \underline{\hspace{2cm}}$

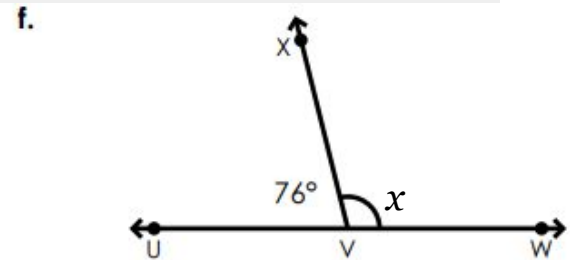
In practice d, e, and f, the two angles are supplementary. Find the supplement of the given angle.



$\angle MNP = \underline{\hspace{2cm}}$



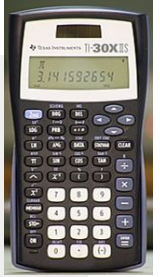
$\angle TRS = \underline{\hspace{2cm}}$



$\angle XVW = \underline{\hspace{2cm}}$



# Practice Answer Key:



In practice a, b, and c, the two angles are complementary. Find the complement of the given angle.

a.

$x + 37^\circ = 90^\circ$   
OR  
 $90^\circ - 37^\circ = 53^\circ$

$\angle ABD = \underline{53^\circ}$

b.

$x + 23^\circ = 90^\circ$   
OR  
 $90^\circ - 23^\circ = 67^\circ$

$\angle HFG = \underline{67^\circ}$

c.

$x + 82^\circ = 90^\circ$   
OR  
 $90^\circ - 82^\circ = 8^\circ$

$\angle LJK = \underline{8^\circ}$

In practice d, e, and f, the two angles are supplementary. Find the supplement of the given angle.

d.

$x + 94^\circ = 180^\circ$   
OR  
 $180^\circ - 94^\circ = 86^\circ$

$\angle MNP = \underline{86^\circ}$

e.

$x + 54^\circ = 180^\circ$   
OR  
 $180^\circ - 54^\circ = 126^\circ$

$\angle TRS = \underline{126^\circ}$

f.

$x + 76^\circ = 180^\circ$   
OR  
 $180^\circ - 76^\circ = 104^\circ$

$\angle XVW = \underline{104^\circ}$

# Additional Links

- ❑ Click On the Link:  
[Mathgames - Complementary and Supplementary Angles](#)
- ❑ Answer the questions that follow about complementary and supplementary angles. You may want your calculator.

The screenshot shows a web interface for 'Math Games'. The top navigation bar includes 'Math Games', 'Grades', 'Skills', 'Games', 'Standards', 'Worksheets', and a 'Subscribe' button. Below the navigation bar, the page title is 'Complementary, Supplementary, Vertical and Adjacent Angles'. There is a 'Scratch Pad' button with a pencil icon. The main content area asks 'What is the value of a missing angle?' and displays a diagram of two intersecting lines. One angle is labeled  $56^\circ$  and the adjacent angle is labeled with a question mark. Below the diagram are four blue buttons with the following options:  $151^\circ$ ,  $124^\circ$ ,  $142^\circ$ , and  $146^\circ$ .

# Additional Links

- ❑ Click On the Link:  
[Complementary and Supplementary Angles - Quizizz](#)
- ❑ Choose either PLAY or FLASHCARDS
- ❑ Work the problems on your own paper and then choose your answer. You may want your calculator.

