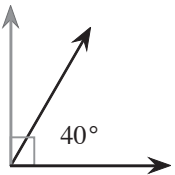


Practice 10-3

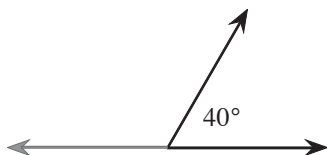
Complementary Angles

1. Which figure shows an adjacent complement for the given angle?

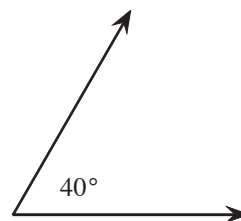
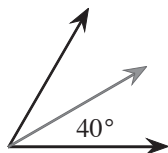
☐ A.



☐ B.

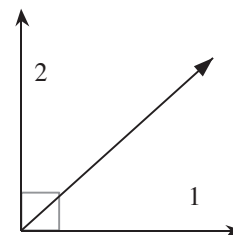


☐ C.



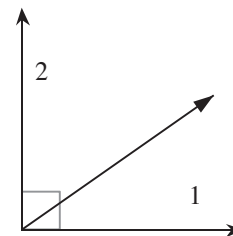
(The figure is not drawn to scale.)

2. Find the measure of the complement of an 18° angle.
3. $\angle 1$ and $\angle 2$ are complementary angles. The measure of $\angle 1$ is 42° . The measure of $\angle 2$ is $3x^\circ$. Find the value of x .

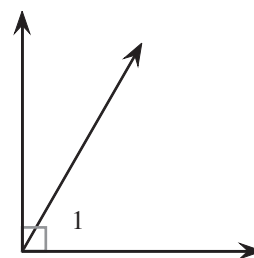


(The figure is not drawn to scale.)

4. $\angle 1$ and $\angle 2$ are complementary angles. The measure of $\angle 1$ is 18° . The measure of $\angle 2$ is $12x^\circ$. Find the value of x .
5. **Writing** Adjacent angles $\angle 1$ and $\angle 2$ are complementary angles. The measure of $\angle 1$ is 35° . The measure of $\angle 2$ is $(8x - 1)^\circ$.
- Find the value of x .
 - Find the measure of $\angle 2$.
 - Explain how the measures let you check your work.

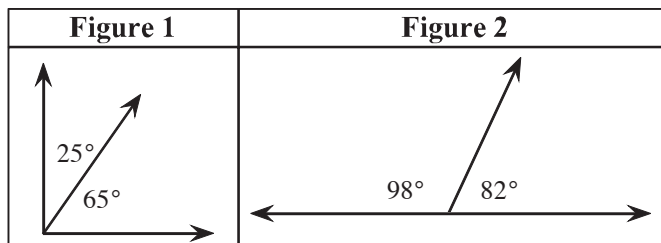


- 6. Reasoning** The measure of $\angle 1$ is 39° .
- Find the measure of the angle adjacent to $\angle 1$.
 - Explain how you know your answer is reasonable.



(The figure is not drawn to scale.)

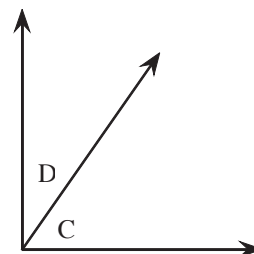
- 7. Error Analysis** Billy says that the angles shown in Figure 1 are complementary. Kelly says that the angles shown in Figure 2 are complementary.



(The figures are not drawn to scale.)

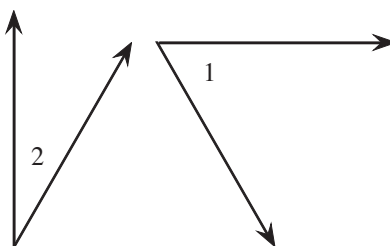
- Which angles are complementary?

<input type="radio"/> A. Figure 2	<input type="radio"/> C. Figure 1
<input type="radio"/> B. Both	<input type="radio"/> D. Neither
 - What was Billy or Kelly's likely error?
 - Billy thought that the sum of the measures of complementary angles is 90° . The sum of the measures of complementary angles is 180° .
 - Kelly thought that the sum of the measures of complementary angles is 180° . The sum of the measures of complementary angles is 90° .
 - Kelly thought that the sum of the measures of complementary angles is 90° . The sum of the measures of complementary angles is 180° .
 - Billy thought that the sum of the measure of complementary angles is 180° . The sum of the measures of complementary angles is 90° .
- 8. Street Intersection** Three streets form an intersection. $\angle C$ and $\angle D$ are complementary angles. If the measure of $\angle D$ is x° and the measure of $\angle C$ is 16° greater than $\angle D$, what is the value of x ?



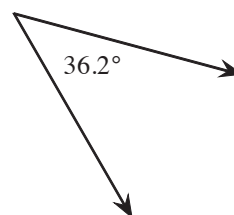
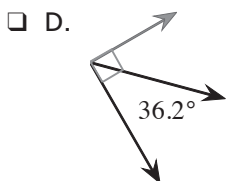
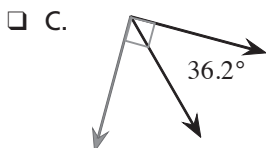
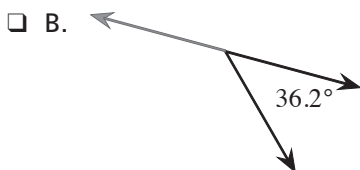
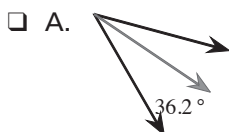
(The figure is not drawn to scale.)

9. $\angle 1$ and $\angle 2$ are complementary angles. The measure of $\angle 1$ is 55° . The measure of $\angle 2$ is $5(x + 1)^\circ$. Find the value of x .



(The figure is not shown to scale.)

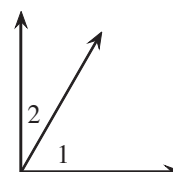
10. **Multiple Representations** Which figures represent the adjacent complements? Check all that apply.



(The figure is not drawn to scale.)

11. **Challenge** The angles shown are complementary angles. The measure of $\angle 1$ is $(17x - 19)^\circ$ and the measure of $\angle 2$ is $(5x + 43)^\circ$.

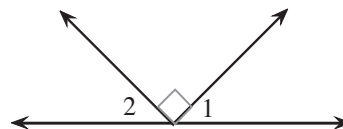
- Find the value of x .
- What is the measure of $\angle 1$?
- What is the measure of $\angle 2$?



(The figure is not drawn to scale.)

12. **Challenge** $\angle 1$ and $\angle 2$ are complementary angles. The measure of $\angle 1$ is $(-5x + 45)^\circ$ and the measure of $\angle 2$ is $(11x + 21)^\circ$.

- Find the value of x .
- What is the measure of $\angle 1$?
- What is the measure of $\angle 2$?



(The figure is not drawn to scale.)