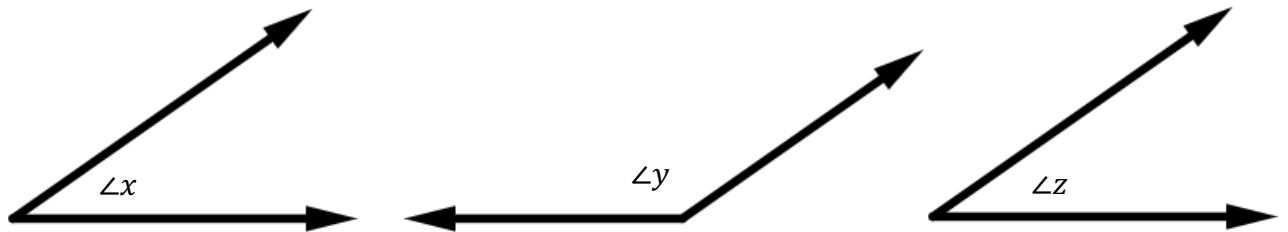


**Angles**  
**Angle Pairs – Part 2**  
**Independent Practice**

1. Complete the following two-column proof that proves the Congruent Supplements Theorem.

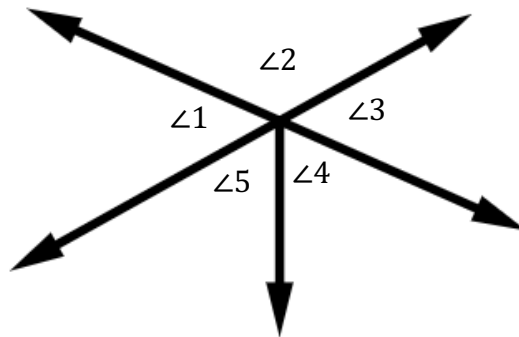


Given:  $\angle x$  and  $\angle y$  are supplements and  $\angle y$  and  $\angle z$  are supplements.

Prove:  $\angle x \cong \angle z$

Statements	Reasons
1. $\angle x$ supplement to $\angle y$	1.
2. $m\angle x + m\angle y = 180^\circ$	2.
3. $\angle y$ supplement to $\angle z$	3.
4. $m\angle y + m\angle z = 180^\circ$	4.
5. $m\angle x + m\angle y = m\angle y + m\angle z$	5.
6. $m\angle x = m\angle z$	6.
7. $\angle x \cong \angle z$	7.

2. Consider the figure below.



Given:  $\angle 2$  and  $\angle 3$  form a linear pair,  $\angle 1$  and  $\angle 3$  are vertical angles, and  $m\angle 1$ ,  $m\angle 4$ , and  $m\angle 5$  form a straight angle.

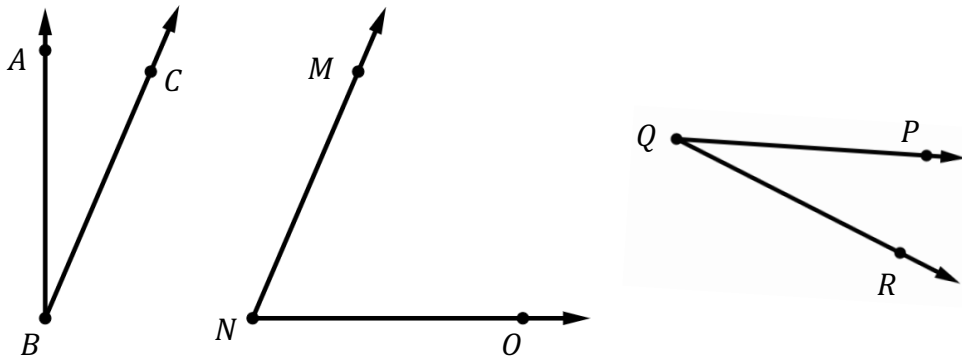
Prove:  $m\angle 2 = m\angle 4 + m\angle 5$

Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

3. If  $m\angle TRI + m\angle CRE = 180^\circ$  and  $\angle TRI \cong \angle CRE$ , what can you conclude about  $m\angle TRI$  and  $m\angle CRE$ ? Justify your answer with a paragraph proof.
4.  $\angle RIO$  and  $\angle RIE$  are supplementary. One angle measures three times the other angle. What is the complement of the smaller angle?
5. The measure of an angle is five degrees greater than six times its supplement. What is the measure of the larger angle?



6. Write a plan and a two-column proof to prove the Congruent Complements Theorem using the figure below.



Plan:

Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.