Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_

Final Review: Units 3 and 4

1. Nicole constructed two lines cut by a transversal. She wants to verify that $\overbar{CD}$ and $\overbar{EG}$ are parallel. Which statement would prove that $\overbar{CD}$ and $\overbar{EG}$ are parallel?
	1. $∠CBF$ and $∠FBD$ are supplementary.
	2. $∠ABD$ and $∠BFE$ are congruent.
	3. $∠CBF$ and $∠BFG$ are congruent.
	4. $∠CBF$ and $∠ABD$ are congruent.

Use the diagram below to answer questions 2 & 3.

1. The diagram shows two parallel lines cut by a transversal. Fill in the blanks to complete the statements.

In the diagram, there are two parallel lines intersected by a transversal.

* Angles 3 and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are consecutive interior angles.
* Because $∠7$ is a corresponding angle to $∠$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and because $∠7$ forms a linear pair with $∠5$ we know $m∠5+m∠3=$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
1. The diagram shows two parallel lines cut by a transversal. Fill in the blanks to complete the statements below.
* In the diagram, $∠3$ and $∠6$ are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ interior angles.
* Because angle 6 is a corresponding angle with $∠$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,
* You can use the transitive property to show that $∠3$ and $∠6$ are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. The following diagrams contain lines $m$ and $n$ and a transversal line. Given $m∥n$ solve for x and justify your reasoning.





1. For the following problems, choose the correct answer and justify why you picked that answer.

1. Nicole is working on the following construction with her compass and straightedge. Which best describes the construction that Nicole is doing?

1. Complete the construction in #6 by drawing in the last step.
2. Milon is working on the following construction with his compass and straightedge. What is he constructing?



1. Complete the construction in #8 by drawing in the last step.
2. Javion is working on the following construction with his compass and straightedge. What is he constructing?



1. A perpendicular bisector.
2. An angle bisector.
3. An altitude
4. A line parallel to line $\overbar{PQ}$
5. Complete the construction in #10 by drawing the last step.
6. Set up and solve an equation to find the value of x.



1. What are the five different theorems we can use to prove that two triangles are congruent?
2. State whether the following diagrams have vertical angles or a reflexive line and write the statement that would go in the proof.



Statement Reason Statement Reason

 X Given X Given

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$∆MPL ≅∆OPN$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ $∆PSR≅∆RQP$