Name:

# Ch. 2 WS 6 - REVIEW FOR CHAPTER 2 TEST

The chapter two test will take place on \_\_\_\_\_\_. It will cover information from 2.5 through 2.8. To prepare, you should look at your notes, assignments, and possibly the chapter review section of your book (p. 158-162). Be able to hit the following targets:

- LT 1: I can identify and use basic postulates about point, lines, and planes.
- LT 2: I can identify key vocabulary related to proofs.
- LT 3: I can use algebra to write two-column proofs.
- LT 4: I can write two-column geometric proofs using postulates, theorems, properties, definitions, etc.

### LT 1 Practice:

- Determine whether each statement is *sometimes*, *always*, or *never* true. Explain your reasoning.
- 1. The intersection of plane M and plane N is point A.
- **2.** If A and B lie in plane W, then  $\overrightarrow{AB}$  lies in plane W.
- 3.  $\overrightarrow{TR}$  lies in plane M.
- **4.** Four points will lie in one plane.
- 5. Two obtuse angles will be supplementary.
- 6. Planes *P* and *Q* intersect in line *m*. Line *m* lies in both plane *P* and plane *Q*.

### LT 2 practice: Study using the "Key Vocabulary" and "Vocabulary Check" on page 158

State whether each sentence is true or false. If false, replace the underlined term to make a true sentence.7. The first part of an if-then statement is the <u>conjecture</u>.

8. <u>Deductive reasoning</u> uses the laws of mathematics to reach logical conclusions from given statements.

9. The <u>inverse</u> of a statement p would be written in the form *not* p.

### LT 3 Practice:

### 7. Solve 4(x + 3) = 52. Write a justification for each step.

Statements	Reasons
4(x+3) = 52	
4x + 12 = 52	
4x + 12 - 12 = 52 - 12	
4x = 40	
$\frac{4x}{40}$	
4 4	
x = 10	

# 8. Complete the following proof.

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

<b>Given:</b> $\frac{y+2}{3} = 3$	<b>Prove: y</b> = 7
Statements	Reasons
	Given
$3\left(\frac{y+2}{3}\right) = 3(3)$	
=	Substitution Property of Equality
y = 7	

### LT 4 Practice:

# 9. Complete the following:



•			•
W	X X	Y	Z

### **Proof:**

Statements	Reasons
<b>1.</b> $\overline{WY} \cong \overline{XZ}$	1. Given
2.	2. Definition of congruence
3. WX + XY = WY	3.
YZ + XY = XZ	
4.	4. Substitution Property of Equality
5. WX + XY - XY = YZ + XY - XY	5.
6.	6. Substitution Property of Equality
7.	7. Definition of congruence

### 10. Prove the following using a two-column proof.

	А	В	С
Given: $\overline{JK} \cong \overline{BC}$ and $\overline{KL} \cong \overline{AB}$	•	•	•
Prove: $\overline{JL} \cong \overline{AC}$	•	•	•
	J	К	L

### Proof:

Statements	Reasons
<b>1.</b> $\overline{JK} \cong \overline{BC}$ ; $\overline{KL} \cong \overline{AB}$	1.
2.  JK = BC; KL = AB	2.
3. $AB + BC = AC$ ; JK + KL = JL	3.
4.  JK + KL = AC	4.
5. AC = JL	5.
6.  JL = AC	6.
7. $\overline{JL} \cong \overline{AC}$	7.