Proof Test Review

Name: _____pd: ___

Define the following:

Conditional statements	
Biconditional statements	
Inductive Reasoning	
Deductive Reasoning	
Counterexample	
Postulate	
Theorem	
Reflexive Property	
Symmetric Property	
Transitive Property	
Distributive Property	
Definition of Congruency	
Supplementary angles	
Complementary angles	
Vertical angles (draw a picture)	
Adjacent angles	
Linear Pair (draw a picture)	

Complete the following patterns:

1) 3, 6, 12, 24, _____, _____

2) a, d, g, j, _____, _____

3) Write a biconditional statement from the following definition: Two angles whose sum is 90° are complementary angles

_____

_____

4) Write the inverse, Converse, & Contrapositive for the following statement and then decide if it is true of false. If false, give a counterexample.

Conditional If I am 16, then I have my driver's license. Counterexample

Inverse _____ T or F _____

Converse _____ T or F _____

Contrapositive _____ T or F _____

5) Determine if the following conjecture is valid. 5) _____

Given: Nicholas can watch 30 minutes of television if he cleans his room first. Nicholas cleans his room.

Conjecture: Nicholas watches 30 minutes of television.

6) Determine if the following conjecture is valid. 6) _____

Given: If a point *A* is on $\overline{MN}$, then $\overline{MA} \cong \overline{AN}$. If $\overline{MA} \cong \overline{AN}$, then *A* is the midpoint of $\overline{MN}$.

Conjecture: If a point A is on $\overline{MN}$, then *it* is the midpoint of $\overline{MN}$.

7) Underline the conclusion, and circle the hypothesis:

I will pass my geometry test, if I do all my homework.

Find the supplement and complement of the following:

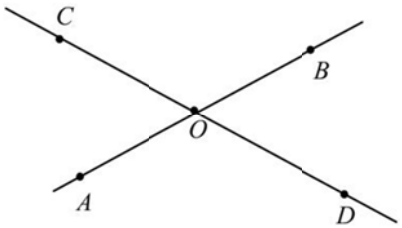
		supplement	**complement**
8)	28.5		
9)	(3x-75)		

10) An angle measures 8 less than 4 times its supplement. Find the measure of the angle and its supplement.

Angle: _____

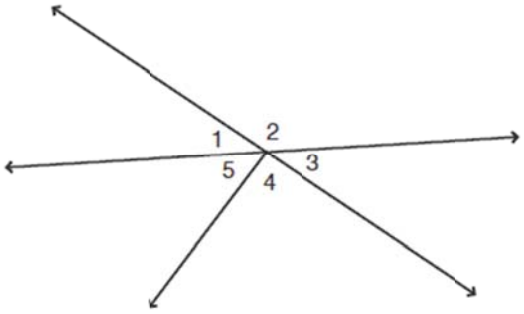
Supplement: _____

Tell if the following are vertical angles, linear pair, adjacent angles, or no relationship (can choose more than 1 label for each pair)



∠COB & ∠BOD	
∠COA & ∠BOD	
∠AOD & ∠COB	

∠1 & ∠5	
∠2 & ∠3	
∠5 & ∠3	
∠3 & ∠4	
∠1 & ∠3	



Identify the property that justifies each statement.

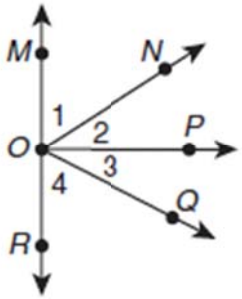
18) m∠1 = m∠2, so m∠1 + m∠3 = m∠2 + m∠3 _____

19) $\overline{MN} \cong \overline{PQ}$, so $\overline{PQ} \cong \overline{MN}$ _____

20) AB = CD and CD = EF, so AB = EF _____

21) m∠A = m∠A _____

Fill in the blanks to complete the proof:

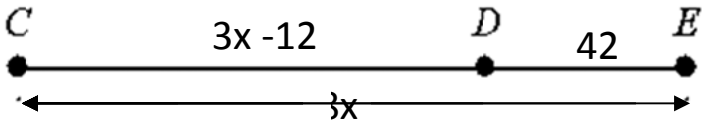


Given: m∠MOP = m∠ROP = 90°; ∠1 ≅ ∠4

Prove: m∠2 = m∠3

Statements	Reasons
1	1 Given
2 m∠1 = m∠4	2
3 m∠1 + m∠2 = m∠MOP m∠3 + m∠4 = m∠ROP	3
4 m∠3 + m∠4 = m∠MOP	4
5 m∠1 + m∠2 = m∠3 + m∠4	5
6 m∠1 + m∠2 = m∠3 + m∠1	6
7	7 Reflexive Prop =
8	8 Subtraction Prop =

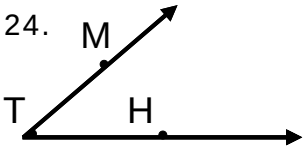
Given:
Prove x = 6



Statements	Reasons
1 CD = 3x-12; DE = 42, CE = 42	1 Given
2	2 Segment Addition Post.
3 8x = 3x-12 + 42	3
4	4
5	5
6	6
7	7
8	8

Use correct notation to name the following.

24.



25.

24. _____

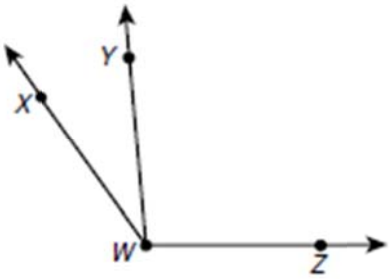
25. _____

26.

26. _____

27) Marc doesn't think that the angle of the front seat in his mom's car is very cool, so he tilts the seat back. m∠ZWY = 95º and m∠YWX = 30 º . Find the measure of ∠ZWX.

m∠ZWX _____



28) $\overrightarrow{AT}$ bisects ∠MAH. m∠MAT = (3x-31)º and m∠TAH = (2x-5)º. Find m∠MAT, m∠TAH, and m∠MAH.