QUIZ DATES: _____ & _____   TEST DATE: _____

Math 2 -- Honors   Name_____
Unit 5 --Triangles & Similarity   Date_____Pd_____
Lesson 1 → Introduction to Key Vocabulary

**Picture This......draw an example in each box.**

Congruent Segments: Segments whose *lengths are equal.*	**Midpoint:** A point that divides a segment into 2 *congruent segments.*
Segment Bisector: A line (or part of a line) that intersects the segment at its *midpoint.*	**Congruent Angles:** Angles whose *measures are equal.*
Angle Bisector: A ray that divides an angle into 2 *congruent angles.*	**Right Angle:** Angle whose measure is 90° **THEOREM: All right angles** are *congruent.*
Perpendicular Lines: Lines (or parts of lines) that intersect to form a *right angle.*	**Perpendicular Bisector:** Line (or part of a line) that is *perpendicular* to a segment at its *midpoint.*
Vertical angles: Two nonadjacent angles formed by 2 intersecting lines. **THEOREM: Vertical Angles** are *congruent.*	**Complementary angles:** Two angles whose *measures* have a *sum is* 90°
Supplementary angles: Two angles whose *measures* have a *sum is* 180°	**Linear pair:** Two adjacent angles whose non-common sides are opposite rays. **POSTULATE: Linear Pairs** are *supplementary.*
Reflexive Property of Congruence: A geometric figure is *congruent to itself.*	**Transitive Property of Congruence:** If *one* geometric figure is congruent to a *second* geometric figure and the *second* geometric figure is congruent to a *third* geometric figure, then the *first* and *third* figures are *congruent.*

I say (or see) ...	You say...	By...
≅ Segments		
Midpoint		
Segment Bisector		
≅ Angles (∠'s)		
Angle Bisector		
Perpendicular (⊥) Lines		
Right Angle		
2 Right Angles		
Perpendicular Bisector		
Vertical Angles		
Complementary Angles		
Supplementary Angles		
Linear Pair		
Shared **Angle**		
Shared **Side**		
$\angle A \cong \angle B$ and $\angle B \cong \angle C$		
$\triangle ABC$ has a right angle		

2

$\overline{TO} \cong \overline{AD}$
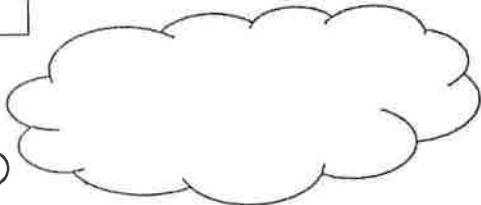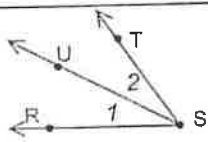
$\angle 4 \cong \angle 5$
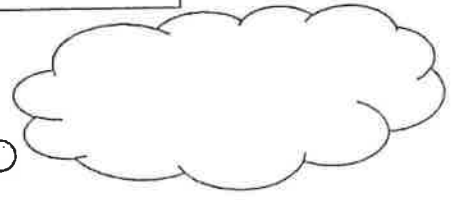
I is the midpoint of $\overline{MD}$
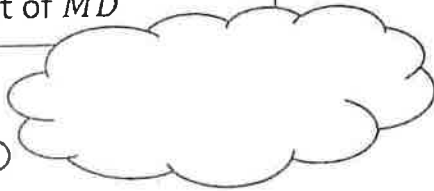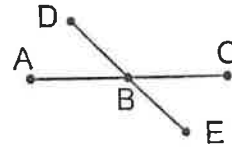
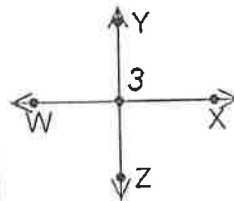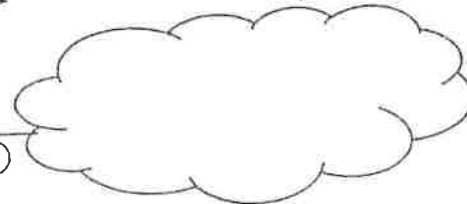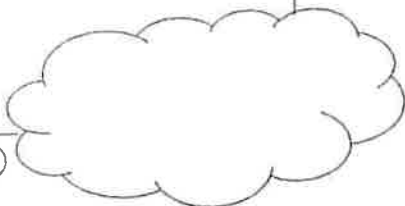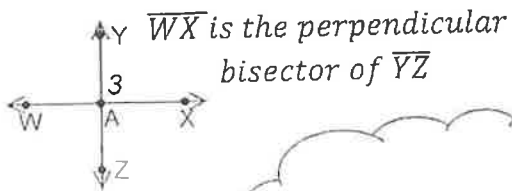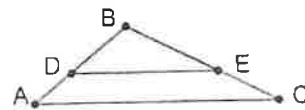$\overline{DE}$ bisects $\overline{AC}$

$\overrightarrow{SU}$ bisects $\angle RST$

$\overleftrightarrow{WX} \perp \overleftrightarrow{YZ}$

$\overleftrightarrow{WX}$ is the perpendicular bisector of $\overline{YZ}$
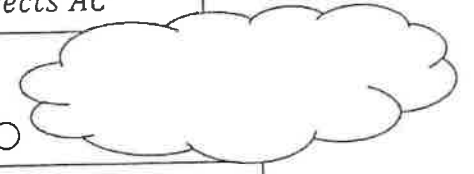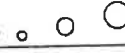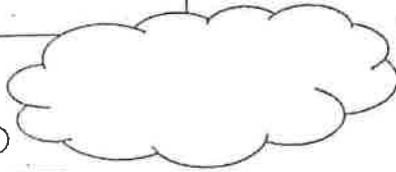
What do you know about $\angle B$?

OR
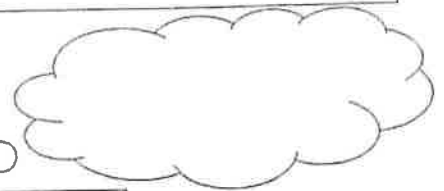
∠L and ∠E are supplementary

↓

∠L and ∠E are complementary

↓

4 5

↓

4 5

↓
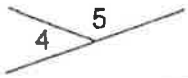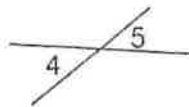
∠H is a right angle

↓

∠C and ∠D are right angles

↓

Q ● ——— ● R
P ●

∠Q is right

↓
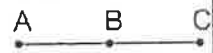
∠5 ≅ ∠8 and ∠8 ≅ ∠4
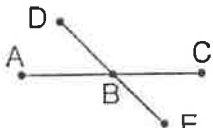
↓

4

Name_____

Date_____ Pd_____
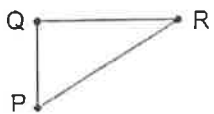
$\overline{RS} \cong \overline{MN}$

B is the midpoint of $\overline{AC}$

A   B   C
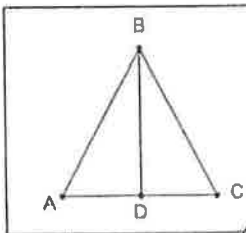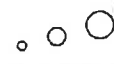
$\overline{DE}$ bisects $\overline{AC}$

D

A   C

B

E

$\overline{BD} \cong \overline{BD}$

B

A   D   C

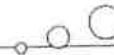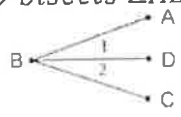M is the midpoint to $\overline{LN}$

L   M   N

∠S is right

∠T ≅ ∠R

$\overrightarrow{BD}$ bisects ∠ABC

A

B   1   D

   2

C

5
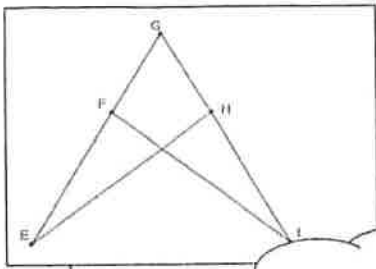
∠G ≅ ∠G

$\overline{CD}$ is the perpendicular bisector of $\overline{AB}$
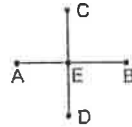
OR

∠1 and ∠2 are supplementary

∠1 and ∠2 are complementary

∠1 and ∠2 are right angles

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1 / 2

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1   2

$\overrightarrow{RS} \perp \overrightarrow{ST}$

TWO COLUMN PROOFS:

Given: $\overline{ED} \perp \overline{AC}$

∠B is a right angle

Prove: $\triangle ADE \sim \triangle ABC$
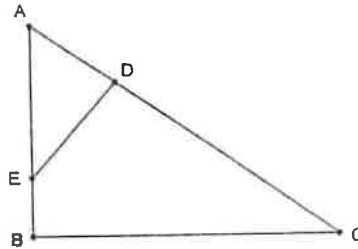
Statements	Reasons

Write a two column similarity proof for each:

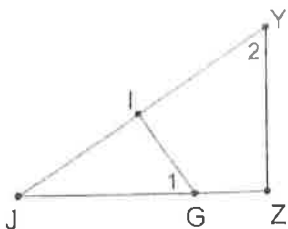1. Given: $\overline{EF} \parallel \overline{RS}$

Prove: $\dfrac{FX}{SX} = \dfrac{EF}{RS}$
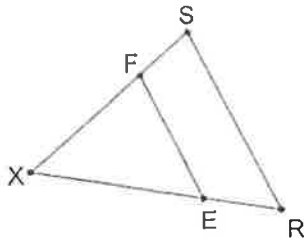
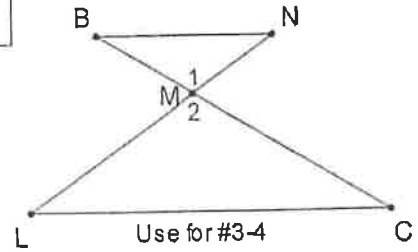| Statements	Reasons

2. Given: $\angle 1 \cong \angle 2$

Prove: $\dfrac{JG}{JY} = \dfrac{GI}{YZ}$

Statements	Reasons

38

3. Given: $\angle B \cong \angle C$
   Prove: $\triangle BNM \sim \triangle CLM$

Statements	Reasons

4. Given: $\overline{BN} \parallel \overline{LC}$
   Prove: $\dfrac{BM}{CM} = \dfrac{NM}{LM}$

Statements	Reasons

Use for #3-4

5. Given: $\angle D$ and $\angle AHE$ are right angles
   Prove: $\angle G \cong \angle AEH$

Statements	Reasons

39