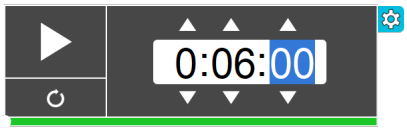
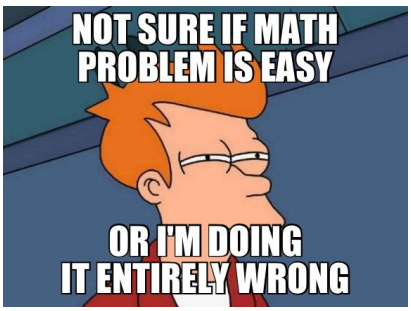
Warm-Up

1. Put your phones in the pouches/away
2. Take out your HW and HW calendar
3. Clear your desk for a skills check

Skills Check





1. There is **NO communication/eye contact** during a quiz to anyone!
2. When you are DONE, **flip it over on your desk.**

HW Answers

What am I learning today?

Learning Objective 2B.3

How to prove two triangles are congruent.

What will I do to show that I have learned it?

I can...Prove two figures are congruent by congruent marks, given statements, and using SSS, SAS, ASA, AAS, or HL

To prove two triangles are congruent, we use a **2**-column proof.

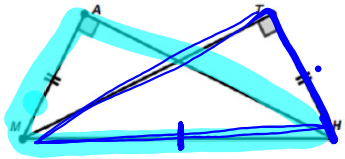
1. BUILD after each **GIVEN** separately.

2. **MARK** the diagram (if it is not already) as your move through the proof

3. Remember, you are looking for **3** pieces of information to be able to prove the two triangles are congruent!

Given: $\angle MAH$ and $\angle HTM$ are right angles and $\overline{MA} \cong \overline{TH}$

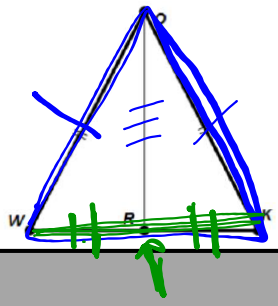
Prove: $\Delta MAH \cong \Delta HTM$



Statements	Reasons
1. $\angle MAH$ and $\angle HTM$ are right angles	1. Given
2. $\overline{MA} \cong \overline{TH}$	2. Given
3. $\angle MAH \cong \angle HTM$	3. All right angles are $\cong$
4. $\overline{MH} \cong \overline{MH}$	4. Reflexive Property
5. $\Delta MAH \cong \Delta HTM$	5. HL

Given: ΔWOK is an isosceles triangle and point R is the midpoint of $\overline{WK}$

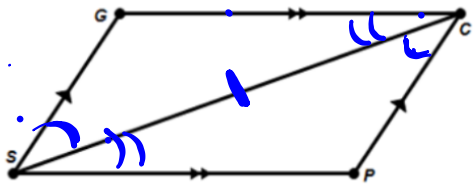
Prove: $\Delta WRO \cong \Delta KRO$



Statements	Reasons
1. ΔWOK is an isosceles Δ	1. Given
2. $WO \cong KO$	2. Legs in an isosceles Δ are $\cong$
3. Point R is the midpoint of WK	3. Given
4. $WR \cong RK$	4. Def. of midpoint
5. $OR \cong OR$	5. Reflexive Property
6. $\Delta WRO \cong \Delta KRO$	6. SSS

Given: $\overline{GC} \parallel \overline{PS}$ and $\overline{GS} \parallel \overline{CP}$ (parallel)

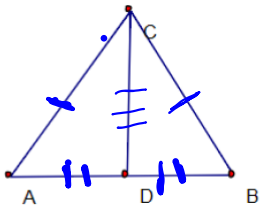
Prove: $\Delta GCS \cong \Delta PSC$



Statements	Reasons
1. $\overline{GC} \parallel \overline{PS}$	1. Given
2. $\overline{GS} \parallel \overline{CP}$	2. Given
3. $SC \cong SC$	3. Reflexive Property
4. $\angle GSC \cong \angle PCS$	4. Alt. int angles are $\cong$
5. $\angle CSP \cong \angle GCS$	5. Alt. int. angles are congruent
6. $\Delta GCS \cong \Delta PSC$	6. ASA

Given: $\overline{AC} \cong \overline{CB}$; $\overline{CD}$ bisects $\overline{AB}$

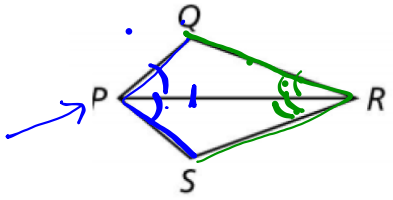
Prove: $\Delta ADC \cong \Delta BDC$



Statements	Reasons
1. $AC \cong CB$	1. Given
2. CD bisects AB	2. Given
3. $AD \cong DB$	3. Def. of bisector
4. $CD \cong CD$	4. Reflexive Prop.
5. $\Delta ADC \cong \Delta BDC$	5. SSS

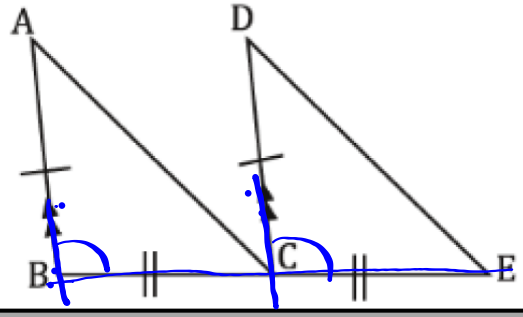
Given: $\overline{PR}$ bisects $\angle QPS$ and $\angle QRS$

Prove: $\Delta PSR \cong \Delta PQR$



Statements	Reasons
1. PR bisects ∠QPS & ∠QRS	1. Given
2. PR ≅ PR	2. Reflexive Prop.
3. ∠QPR ≅ ∠RPS	3. Def. of bisector
4. ∠QRP ≅ ∠SRP	4. Def. of bisector
5. ΔPSR ≅ ΔPQR	5. ASA

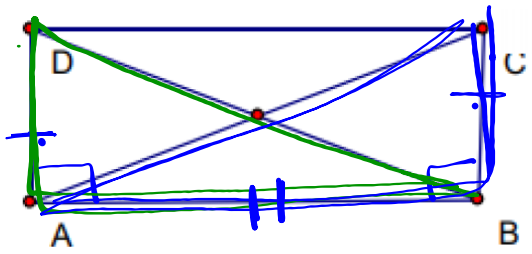
Prove: $\Delta ~~BAB~~ \cong \Delta ~~CBA~~$
CAB EDC



Statements	Reasons
1. AB ≅ DC	1. Given
2. AB ∥ DC	2. Given
3. BC ≅ CE	3. Given
4. ∠B ≅ ∠C	4. Corresponding ∠s are ≅
5. ΔCAB ≅ ΔEDC	5. SAS

Given: $\overline{DA} \cong \overline{CB}$; $\overline{DA} \perp \overline{AB}$; $\overline{CB} \perp \overline{AB}$

Prove: $\Delta DAB \cong \Delta CBA$



Statements	Reasons
1. $DA \cong CB$	1. Given
2. $DA \perp AB$	2. Given
3. $CB \perp AB$	3. Given
4. $\angle A$ & $\angle B$ are right $\angle$s	4. Def. of perp.
5. $\angle A \cong \angle B$	5. All right $\angle$s are $\cong$
6. $AB \cong AB$	6. Reflex.
7. $\Delta DAB \cong \Delta CBA$	7. SAS

Classwork: [redacted]

Complete the classwork about proving congruent triangles.

HW: On top of the bin.