

Good morning: no warm up, we'll randomize, get assessments back, then go over hw

Reminders:

retakes in any DS but Weds.
tutoring/retakes 4-5p today

next assessment: Monday

Assessments...pretty good!

Weak spot: CO-B6

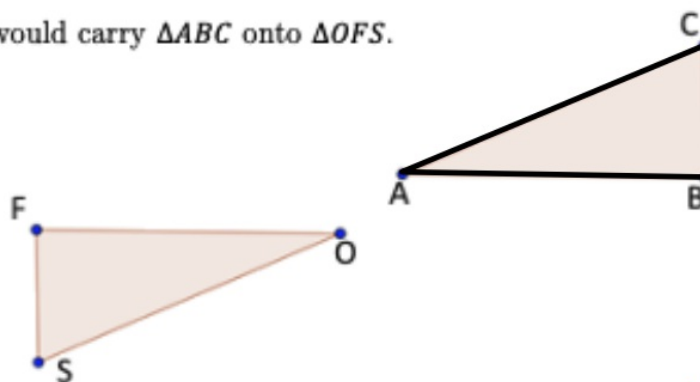
HW for new skills:

CO-B7: p 146 #6-11

CO-B8: Recognizing Triangle Congruence handout

SELF: CO-B6a:

11. Describe in detail a sequence of rigid motions that would carry $\triangle ABC$ onto $\triangle OFS$.



Scenario for #12-13:

T_1 is a transformation with rule $(x, y) \rightarrow (-x, -y)$ and T_2 is a transformation with rule $(x, y) \rightarrow (x, -y)$.

12. Determine whether each of T_1 and T_2 is a translation, reflection, or rotation and describe in detail what each rule does to the figure's location.

CCW
90°: $-y, x$
180°: $-x, -y$
270°: $y, -x$

13. Suppose a pre-image lying wholly in the second quadrant undergoes T_1 , followed by T_2 . In which quadrant is the resulting image?

Are proofs always written out in paragraphs?

No...but mathematicians always write papers

The two-column proof is only in HS geometry but it can be helpful to organize thinking

It's sort of a rough draft or outline, where the paragraph is the actual argument itself.

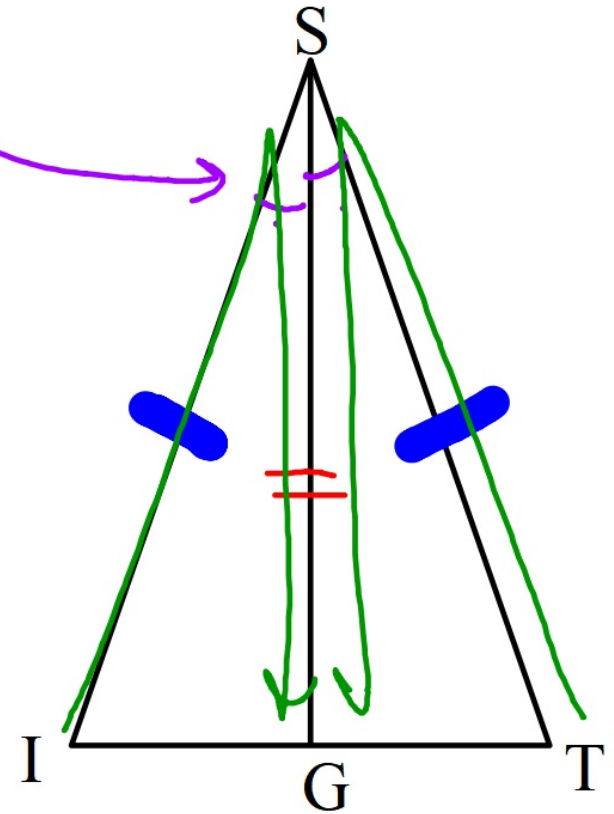


The Two Column Proof: an "outline"

GIVEN: $\overline{IS} \cong \overline{TS}$, \overline{SG} bisects $\angle IST$

PROVE: $\angle I \cong \angle T$

Statements	Reasons
1. $\overline{IS} \cong \overline{TS}$, \overline{SG} bisects $\angle IST$.	1. Given
2. $\overline{SG} \cong \overline{SG}$	2. Reflexive prop.
3. $\angle ISG \cong \angle TSG$	3. Def'n of bisect
4. $\triangle ISG \cong \triangle TSG$	4. SAS
5. $\angle I \cong \angle T$	5. CPCTC

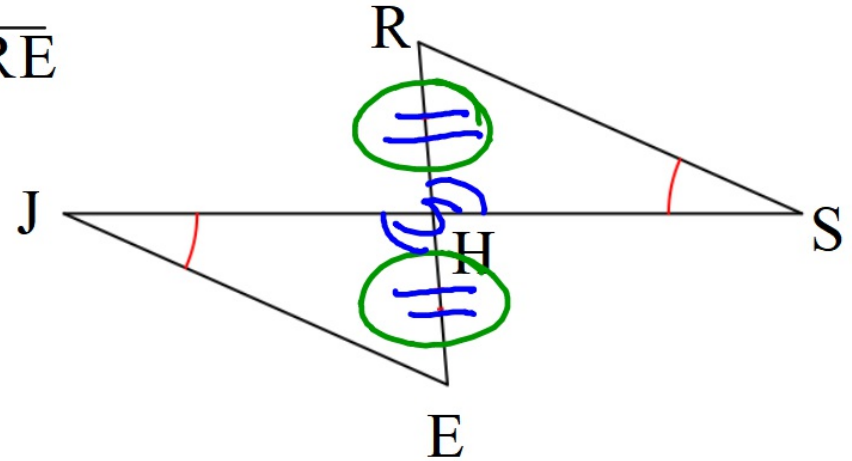


Where to find evidence:

- - vertical angles
- - shared sides
- - alt. interior angles
- ~~•~~ - definitions in the given



GIVEN: $\angle J \cong \angle S$, H is the midpoint of \overline{RE}
 PROVE: $\overline{RS} \cong \overline{EJ}$



Statements	Reasons
1. blah blah	1. Given
2. $\angle JHE \cong \angle SHR$	2. Vertical Angles
3. $\overline{RH} \cong \overline{EH}$	3. Def'n of Midpt.
4. $\triangle JHE \cong \triangle SHR$	4. AAS
5. $\overline{RS} \cong \overline{EJ}$	5. CPCTC

The criteria to prove triangles congruent:

AAS

SAS

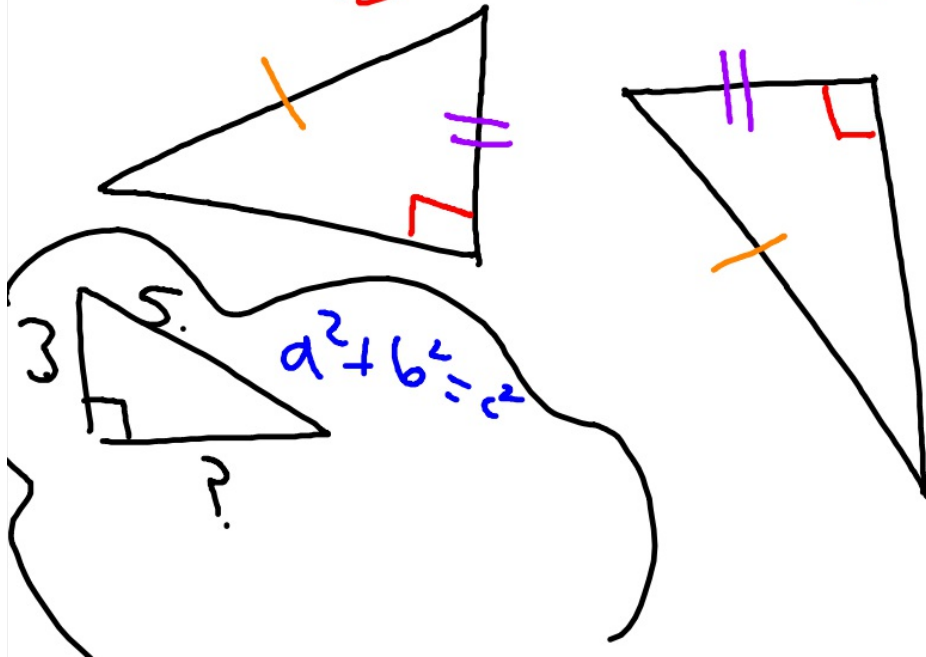
SSS

ASA



HL

Hypotenuse - Leg
(longest side of a rt Δ)
(other sides of right Δ)



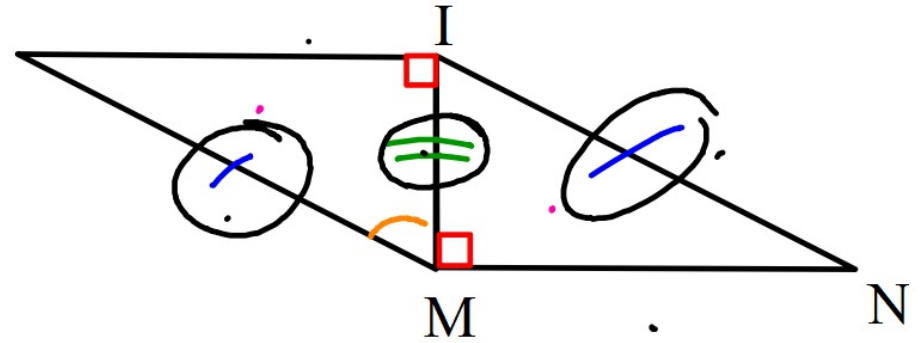
why not introduce
with the other 4?

- only valid for right tri.
- really just an application of SSS with Pythagorean Theorem



Given: $\angle DIM = 90^\circ$, $\angle NMI = 90^\circ$, D
 $\overline{DM} \cong \overline{NI}$

Prove: $\angle D \cong \angle N$



S

R

1. \rightarrow

2. $\overline{IM} \cong \overline{MI}$

3. $\angle DIM \cong \angle NMI$

4. $\triangle IMD \cong \triangle MIN$

S?

$\angle D \cong \angle N$

1. Given

2. Reflexive Prop

3. Def'n of congruence

4. ~~SSA~~ HL

S?

C.P.C.T.C

Whiteboard geometry!

Each group gets a problem

Find a whiteboard spot around the room

One pen per group--talk it out!

Make mistakes, work it out--whiteboards are meant to be temporary

We will do a gallery walk afterward

HW

p. 159 #8-12

(no CPCTC in these....note that all the 'prove'
goals are triangle statements)