Warm-up:

1. Put your phones in the pouches/away.

2. Complete your Warm-Up

Jul 31-9:37 PM

1. What's the difference between an angle bisector and a segment bisector?

2. Write the logical way of creating a peanut butter and jelly sandwich.

What does it mean to prove something?

To provide or demonstrate sufficient evidence that something is TRUE!

Basically, to win an argument!

Why do a proof in Geometry?

To show our understanding of Geometry topics and how they all connect!

3 RULES of Uno!

1. You can play a card of the same color.

2. You can play a card of the same number.

3. You can play a WILD card at any time in order to change the color.

The first card is the GIVEN card

How could we get to

Given

Prove

Use these cards

Given

Prove

Use these cards

Two-Column Proof

Statements	Reasons
Progression of our argument laid out STEP by STEP These statements are things that MUST be true!	**WHY** CAN WE SAY THE STATEMENTS? (These can be postulates, theorems, or explanations) Why are the statements TRUE?

Feb 12-7:51 AM

Flowchart for a Good Proof:

GIVEN

- Should always be one of your **GIVEN** statements
- Use your knowledge to build off of this

⇩

Statements/ Conclusions

- Continue using ***LOGICAL*** conclusions
- Look for OBVIOUS things (shared sides, linear pairs, vertical angles, etc.)

⇩

END

- Your "prove" should be your **LAST** statement! *

Formal 2-Column Proof

Given: Blue 6  **Prove:** Yellow Reverse 


Statements: (What Card to Play)	**Reasons:** (Why can we play this card?)
1) Blue 6	1) Given
2) WILD	2) Change color (yellow)
3) Yellow Reverse	3) Same color

Formal 2-Column Proof

Given: Blue 5  **Prove:** Green 6 


Statements: (What Card to Play)	**Reasons:** (Why can we play this card?)
1) Blue 5	1) Given
2) Blue 1	2) SAME color
3) Green 1	3) SAME #
4) Green 6	4) SAME color

UNO Proofs

Use the "given" and "prove" statements to help build your two-column "proofs"

#3 - NO RED 8

#6 - NO BLUE 5

What am I learning today?

Learning Objective 2B.1

How to use two-column proofs.

Jul 31-6:18 PM

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

I can...Use properties, theorems, and mathematical definitions to help complete "statements" and "reasons" in a proof

Jul 31-6:18 PM

Use SIMPLE PROPERTIES AND PROPERTIES OF EQUALITY!

Addition Property of Equality	Subtraction Property of Equality
Multiplication Property of Equality	Division Property of Equality
Symmetric Property	If a = b, then b = a

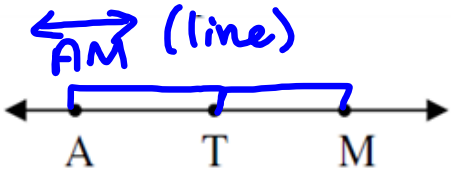
Given: $2x + 3 = 4x - 7$

Prove: $x = 5$

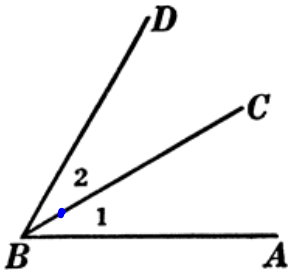
Statements	Reasons
1. $2x+3=4x-7$	1. Given
2. $3 = 2x-7$	2. Sub. Prop. of Eq.
3. $10 = 2x$	3. Add. Prop. of Eq.
4. $5 = x$	4. Div. Prop. of Eq.
5. $x = 5$	5. Sym. Prop.

Aug 23-8:01 AM

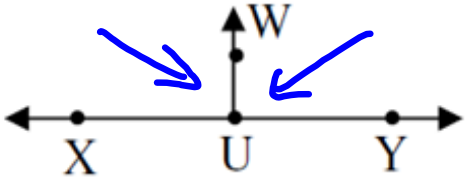
What can we assume about the following diagrams?



AT + TM = AM

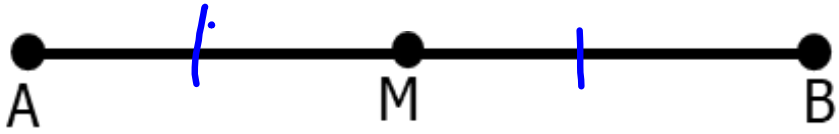


∠1 + ∠2 = ∠DBA



∠XUW + ∠WUY = 180°

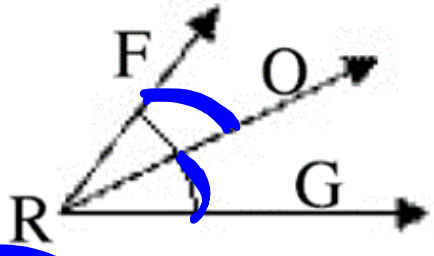
Drawing Conclusions



Given: M is the midpoint of AB

Conclusion: $\overline{AM} \cong \overline{MB}$

Why? Def. of midpoint



Given: RO bisects Angle FRG

Conclusion: $\angle FRO \cong \angle ORG$

Why? Def. of bisector

Given: Angle DAY and Angle YAK are a linear pair

Conclusion: $\angle DAY + \angle YAK = 180°$

Why? Def. of linear pair

Given: $\angle GFH \cong \angle IFH$

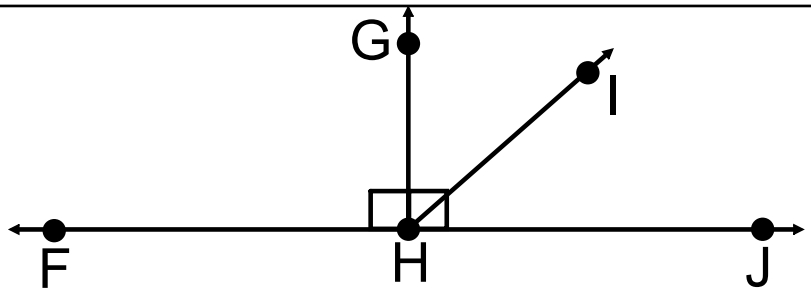
Prove: $m\angle GFH = m\angle IFH$

Why? Def. of congruency

Given: $HF = PM$

Prove: $HF \cong PM$

Why? Def. of congruency

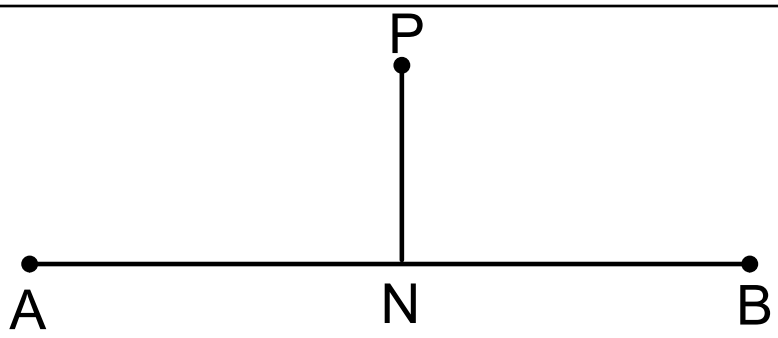


Given: $\angle GHF$ is a right angle.

Prove: m$\angle GHF$ = 90°

Statements	Reasons
1. ∠GHF is a right ∠	1. Given
2. m∠GHF = 90°	2. Def. of right angle

Feb 12-7:54 AM

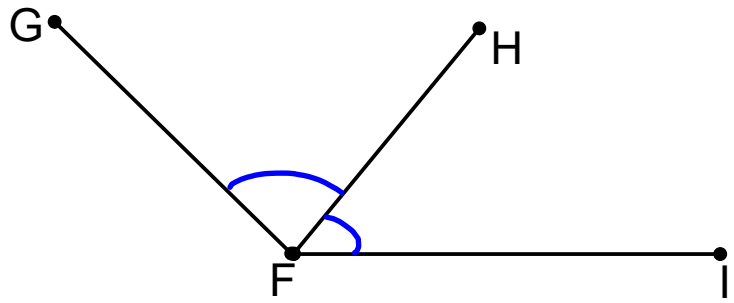


Given: $PN \perp AB$

Prove: $\angle ANP$ and $\angle BNP$ are right angles

Statements	Reasons
1. PN ⊥ AB	1. Given
2. ∠ANP & ∠BNP are right angles	2. Def. of perpendicular

Feb 12-7:54 AM



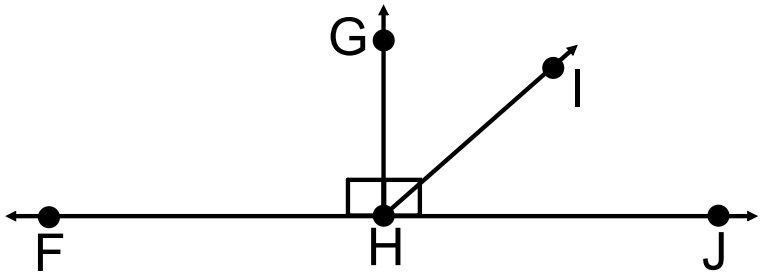
Given: HF bisects $\angle GFI$

Prove: $m\angle GFH = m\angle IFH$

Statements	Reasons
1. HF bisects ∠GFI	1. Given
2. ∠GFH ≅ ∠IFH	2. Def. of bisector
3. m∠GFH = m∠IFH	3. Def. of congruency

Feb 12-9:05 AM

Use EXPLANTIONS!

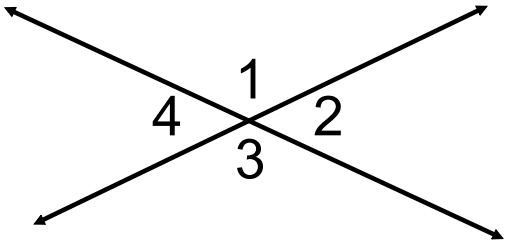


Given: $\angle GHF$ and $\angle GHJ$ are right angles

Prove: $\angle GHF \cong \angle GHJ$

Statements	Reasons
1.	1.
2.	2.

Feb 12-7:55 AM



Given: $\angle 4$ and $\angle 2$ are vertical angles.

Prove: $\angle 4 \cong \angle 2$

Statements	Reasons
1.	1.
2.	2.

Feb 12-7:55 AM

Use OTHER PROPERTIES/THEOREMS/POSTULATES!

Substitution Property	Replaces a number or a piece of an expression
Transitive Property	If a = b and b = c, then a = c
Segment Addition Postulate	Two smaller segments added together creates a bigger segment
Angle Addition Postulate	Two smaller adjacent angles added together creates a bigger angle

Given: $\angle 4 \cong \angle 2$ and $\angle 2 \cong \angle 5$

Prove: $\angle 4 \cong \angle 5$

Statements	Reasons
1.	1.
2.	2.
3.	3.

Feb 12-7:55 AM

Classwork: [redacted]

Complete the classwork with cutting and gluing all of the statements and reasons for each "baby" proof

HW: Drawing conclusions worksheet