TH-G Geometry Week 10

1. a) If yogurt is green and smells weird, then you probably should not eat it.

hypothesis

conclusion

Converse

If you should not eat yogurt, then it is probably green and smells weird.

b) If you pee in the bath tub, then you have done something very wrong.

hyp

conclusion

Converse

If you have done something wrong, then you peed in the bath tub.

2 b) If you are friends with Nate, then you are accustomed to disappointment

Converse

If you are accustomed to disappoint, then you are friends with Nate

If you are the Bezos, then you are the richest person in the world

Converse

If you are the richest person in the world, then you are the Bezos.

Biconditional statement

You are the richest person in the world if, and only if, you are the Bezos.

3a) If you are a fan of Macklemore, then you have poor taste in music.

hyp — conclusion

Nate has poor taste in music

conclusion

no conclusion

you cannot return the hypothesis

3b) If you say you're going to bring donuts and don't bring donuts, then Hannah is going to knock you out.

Nate said he was going to bring donuts and didn't

Hannah knocked Nate out.

If you do well in school, then you will go to college.
A → B

If you go to college, then success.
B →

Charlie is doing well in school → success
A → C

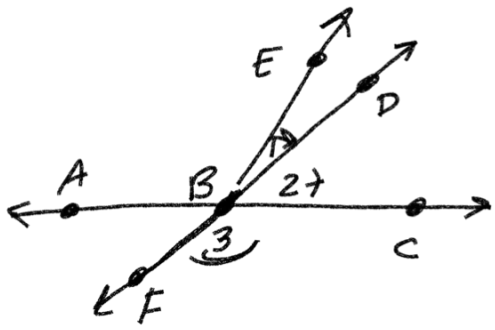
5.)

a) Given: $8x + 3 = 43$

Prove: $x = 5$

Statement	Reasons
$8x + 3 = 43$	Given
$-3 \quad -3$	Subtraction
$8x = 40$	Division
$x = 5$	

6 a)



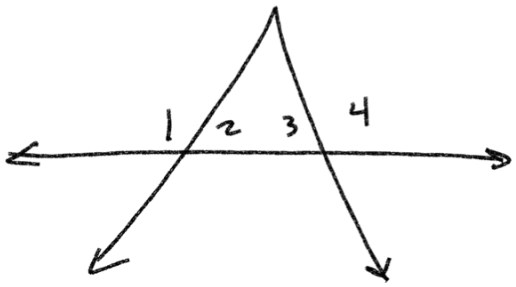
Given: $\overline{BD}$ bisects $\angle EBC$

Prove $\angle 1$ and $\angle 3$ are supplementary

statement	reasm
1. $\overline{BD}$ bisects $\angle EBC$	Given
2. $\measuredangle 1 = \measuredangle 2$	Definition of an angle bisector
3.) $\measuredangle 2$ and $\measuredangle 3$ form a linear pair	[Def of linear pair or supplemental angles
4.) $m\measuredangle 2 + m\measuredangle 3 = 180°$	Definition of linear pair
5.) $m\measuredangle 1 = m\measuredangle 2$	Def of congruence
6.) $\measuredangle 1 + \measuredangle 3 = 180°$	Substitution
7.) $\angle 1$ and $\measuredangle 3$ are supplementary	Def of supplementary angles

Given $\angle 2 \cong \angle 3$

Prove $\angle 1 \cong \angle 4$



	Statement	Reason
1.)	$\angle 1$ and $\angle 2$ form a linear pair $\angle 3$ and $\angle 4$ form a linear pair	Def of linear pair
2.)	$\angle 1$ and $\angle 2$ are supplementary $\angle 4$ and $\angle 3$ are supplementary	Def of supplementary angles
3.)	$\angle 2 \cong \angle 3$	given
4.)	$\angle 1 \cong \angle 4$	substitution

$\angle 1 + \angle 2 = 180$

$\angle 4 + \angle 3 = 180$

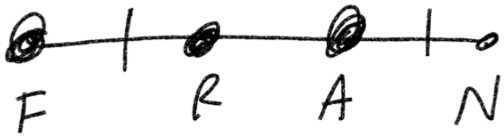
$\angle 1 + \angle 2 = \angle 4 + \angle 3$

$\angle 2 = \angle 3$

$\angle 1 + \angle 2 = \angle 4 + \angle 2$

subtraction

$\angle 1 = \angle 2$



Given $\overline{FR} = \overline{AN}$

Prove $\overline{FA} = \overline{RN}$

1 $\overline{FA} = \overline{FR} + \overline{RA}$ — 2

$\overline{RN} = \overline{RA} + \overline{AN}$

segment Add Post

seg Add Post

Given $\overline{FR} = \overline{AN}$

2 $\overline{RN} = \overline{RA} + \overline{FR}$ — 2

Substitution

$\overline{FA} = \overline{RN}$

Transitive Property

1 = 2

2 = 3

1 = 3

Quiz 9 due tonight

HW

Optional HW 10

Ch 2 Pre-Test

Ch 2 Test Cdue Nov 12th