Angle Relationships Intervention-ACC

Name: **Key**   Hr. _____

Detailed directions because of MAP testing:

Since the accelerated class *as a whole* is not foundationally performing to the quality of an accelerated class, with work ethic and homework study skills, we are completing this intervention. Two lessons have been postponed because of students not completing homework, checking answers online or asking questions. This cannot happen in an accelerated course, as there is not enough time to spend 5 days on one concept. Therefore, this is your last opportunity to master your material. If you are unsure of vocabulary, you will need to master the concepts prior to your quiz and test.

You will:

a.) complete this assignment

b.) check your answers online- use RED pen to show any correction you make (DO NOT COPY WORK)

c.) bring in any questions- you will need to write them down on your assignment, in red, PRIOR to coming into class

d.) earn a grade based on the quality of work you provide

You have a quiz on this material, segment relationships, distance and midpoint on Wednesday, Sept. 17th. No extra time will be provided for the quiz. Failure to prepare for your quiz usually results in not finishing your quizzes on time and earning low scores. It is my hope you will come in with quality work and questions to help you be successful on your quiz! I have faith in all of you and know you can exceed high expectations! Let's do this ACC Geometry!

Homework Questions:

1. Two angles are complementary. The measure of one angle is 21 more than twice the measure of the other angle. Set up TWO equations to represent this information and then find the measures of the angles using correct units on your final answers.

① EQ #1: $<1 + <2 = 90$ (You may name them differently)

EQ #2: $<1 = 2<2 + 21$

② Math: $(<1) + <2 = 90°$

$(2<2 + 21) + <2 = 90$

$3<2 + 21 = 90$

$3<2 = 69 \div 3$

$\boxed{<2 = 23°}$

$<1 = 2<2 + 21$

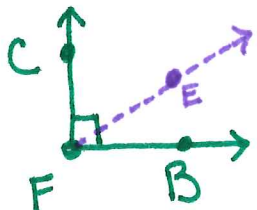$<1 = 2(23) + 21$

$\boxed{<1 = 67°}$

$\boxed{67°, 23°}$

* Must have degrees on angles *

a.) Draw the picture if one is not given to you.

b.) Set up your geometry first and justify you set up.

c.) Justify all steps.

Note* You may not change or rename any angles

2. $\overrightarrow{FC} \perp \overrightarrow{FB}$. If point E lies in the interior of $<CFB$, find x such that $<CFE = 8x - 2$ and $<EFB = 2x + 13$.

a.) No Picture is drawn... So You **must** draw one.

b.) $\boxed{<CFE + <EFB = 90°}$ def of $\perp$

c.) $8x - 2 + 2x + 13 = 90$ ← Substitution

$10x + 11 = 90°$ → CLT

$10x = 79$ → subtraction

$x = 7.9$ → division

* Not $<$ addition *
If you use $<$ add you must set up:
$<CFE + <EFB = <CFB$ * angle addition

Then you still need the 1st blue step

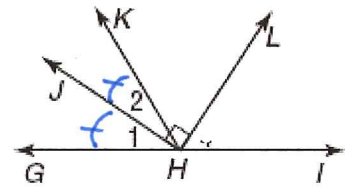**3.** If <SXT=3a − 4, <RXS=2a + 5, <RXT=111°. Find a and the measure of <RXS.
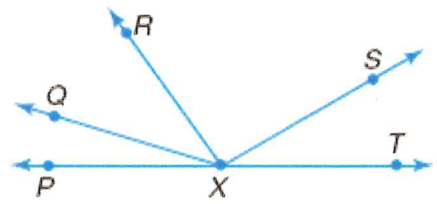
b.) $\angle RXT = \angle RXS + \angle SXT$ angle addition

c.) $111° = 2a + 5 + 3a - 4$ substitution

$111 = 5a + 1$ CLT

$110 = 5a$ subtraction

$\boxed{22 = a}$ division

$\angle RXS = 2(22) + 5$ substitution

$\boxed{\angle RXS = 49°}$ CLT

$\overrightarrow{HL}$ **is an angle bisector of <KHI, $\overrightarrow{HJ}$ bisects <KHG and $\overrightarrow{HJ} \perp \overrightarrow{HL}$.**
You may not change or rename any angles
4. $< KHG = 70°$, and $< 1 = 3d + 2$. Find d.

$\angle 1 \cong \angle 2$ def of ∠ bisector

$\angle KHG = \angle 1 + \angle 2$ angle addition

$\angle KHG = \angle 1 + \angle 1$ substitution   *must show this or something close... yet in this step only*

$70 = 3d + 2 + 3d + 2$ substitution   *No degrees GED* ☺

$70 = 6d + 4$ CLT

$66 = 6d$ subtraction   ÷ by 6

$\boxed{11 = d}$ division

---

5. Find m <KHL if $< IHL = 4y + 11$ and $< KHL = 6y + 5$.

$\angle IHL \cong \angle KHL$ def of ∠ bisector

$4y + 11 = 6y + 5$ substitution

$11 = 2y + 5$ subtraction

$6 = 2y$ subtraction

$3 = y$ division

$\angle KHL = 6(3) + 5$ substitution

$\boxed{\angle KHL = 23°}$ CLT

make sure you only show what is being asked of you. Giving too much info makes you seem like you don't know what you are asked to do.