Quiz – Complementary & Supplementary Name _____

Date _____

1. If the complement of an angle is 63°, what's its supplement?

$90-63=27°$

$180-27=\boxed{153°}$

2. The complement of an angle plus half of the supplement is 126. What's the measure of the angle?

$(90-x)+\frac{1}{2}(180-x)=126$

$90-x+90-\frac{1}{2}x=126$

$180-1.5x=126$

$-1.5x=-54$

$\boxed{x=36}$

3. 2 angles are complementary. One of the angles is 8 more than twice the other. What is the measure of the larger angle?

$x+(2x+8)=90$

$3x+8=90$

$x\approx 27.3$

$90-27.3=\boxed{62.67°}$

4. 2 supplementary angles are in a 7:2 ratio. What are the 2 angles?

$7x \quad 2x$

$7x+2x=180$

$9x=180$

$x=20$

So $2(20)=\boxed{40°}$

$7(20)=\boxed{140°}$

5. An angle is 68°32'. Find the complement of half of this angle.

$\frac{1}{2}(68°32')$

$=34°16'$

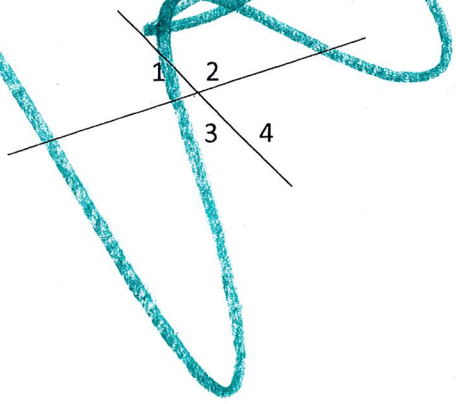
$89\ 60$

$90\ 00$

$-\ 34\ 16$

$55°44'$

6. Given ∠1 = 103°. Use the diagram at right to find the measures of the angles.



∠2 = $180-103=77°$

∠3 = $180-103=77°$

∠4 = $180-77=103°$

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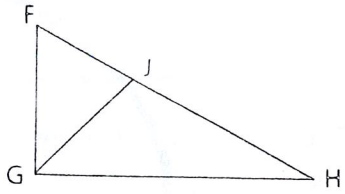
7. If 2 angles are supplementary they are (always/sometimes/never) both acute.

8. If 2 an acute angle is bisected, the resulting angles are (always/sometimes/never) both acute.

9. Given: $\angle F$ is compl to $\angle FGJ$, $\angle H$ is compl to $\angle HGJ$

GJ bisects $\angle HGF$

Prove: $\angle F \cong \angle H$



1.	_____	1. Given
	_____	
2.	$\angle FGJ \cong \angle HGJ$	2. Def Bis
3.	$\angle F \cong \angle H$	3. Congruent Compl. Theorem