Geometry

Chapter 2.7 – Angle Proofs

Name: _____

Standards:

Items in bold should be turned in to me or put in your binder.

_____**video notes**

_____**postulate sheet** (copy postulates from section 2.8 in your book)

_____**worksheet #1**
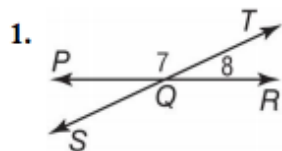
_____**worksheet #2**

_____extra ws
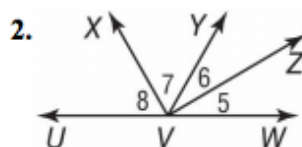
_____book assignment

_____extra video
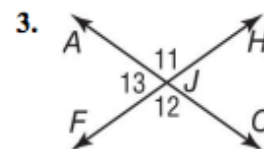
_____practice mc

_____**mastery check**

Practice mc:

Find the measure of each numbered angle and name the theorem that justifies your work.

1.

$m\angle 7 = 5x + 5,$
$m\angle 8 = x - 5$

2.

$m\angle 5 = 5x, m\angle 6 = 4x + 6,$
$m\angle 7 = 10x,$
$m\angle 8 = 12x - 12$
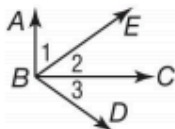
3.

$m\angle 11 = 11x,$
$m\angle 13 = 10x + 12$

Geometry

Complete each proof.

1. Given: $\overline{AB} \perp \overline{BC}$;
   $\angle 1$ and $\angle 3$ are
   complementary.
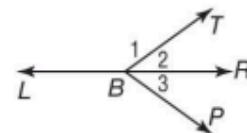   **Prove:** $\angle 2 \cong \angle 3$
   Proof:

Statements	Reasons
a. $\overline{AB} \perp \overline{BC}$	a. _____
b. _____	b. Definition of $\perp$
c. $m\angle ABC = 90$	c. Def. of right angle
d. $m\angle ABC = m\angle 1 + m\angle 2$	d. _____
e. $90 = m\angle 1 + m\angle 2$	e. Substitution
f. $\angle 1$ and $\angle 2$ are compl.	f. _____
g. _____	g. Given
h. $\angle 2 \cong \angle 3$	h. _____

2. Given: $\angle 1$ and $\angle 2$
   form a linear pair.
   $m\angle 1 + m\angle 3 = 180$
   Prove: $\angle 2 \cong \angle 3$
   Proof:

Statements	Reasons
a. $\angle 1$ and $\angle 2$ form a linear pair. $m\angle 1 + m\angle 3 = 180$	a. Given
b. _____	b. Suppl. Theorem
c. $\angle 1$ is suppl. to $\angle 3$.	c. _____
d. _____	d. $\angle$s suppl. to the same $\angle$ or $\cong \angle$s are $\cong$.

Be able to complete proofs on your own (without fill in the blanks!)