NAME DATE DUE:

3.3b Homework - Ready, Set, Go

Complete all work on **this** piece of paper. Make your thinking visible.

1. Justify the given statement with an algebraic property from you pink sheet.

a) If $m\angle 1 = m\angle 2$ then $m\angle 2 = m\angle 1$.

b) If ME + NT = NT + OR then ME = OR.

c) If ME = NT and NT = OR then ME = OR

d) ME = EM

e) If $m\angle A + m\angle B = 180º$ and $m\angle C + m\angle D = 180º$ then $m\angle A + m\angle B = m\angle C + m\angle D$

f) If $2(m\angle A) = m\angle B$ then $m\angle A = 1/2\ (m\angle B)$.

g) If AB + BC + AB = CD then 2(AB) + BC = CD.

2. The segments and angles in each problem are corresponding parts of two congruent triangles. Make a sketch of the two triangles and mark congruent parts. Then identify the congruence pattern that justifies your statement. Finally, write a congruence statement for each pair of triangles represented. See worksheet 3.3a for an example, if needed.

$\overline{CY} \cong \overline{RP}, \angle Y \cong \angle P, \angle E \cong \angle B$

a. Sketch of Triangles

b. Congruence shortcut: _____

c. Congruence statement:

$\overline{BC} \cong \overline{JK}, \overline{BA} \cong \overline{JM}, \angle B \cong \angle J$

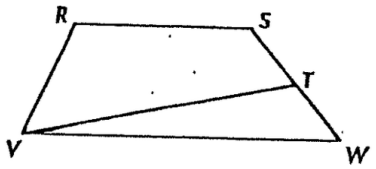
a. Sketch of Triangles

b. Congruence shortcut: _____

c. Congruence statement:

3. Write the equation of a line perpendicular to $5x + 2y = 35$ through the point $(4, -3)$

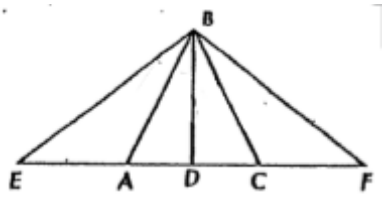
4. **Use definitions and properties to complete the mini proofs.**



[i]. Given: $\overline{VT}$ is the bisector of $\overline{SW}$

Statement:

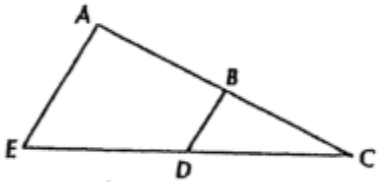
Reason:



[ii]. Given: $\overline{BD}$ bisects $\angle EBF$

Statement:

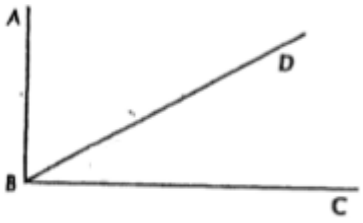
Reason:



[iii]. Given: B is the midpoint of $\overline{AC}$

Statement:

Reason:



[iv]. Given: $\angle ABD \cong \angle DBC$

Statement:

Reason:

5. Draw a picture of the following situation: Point *I* is somewhere between *P* and *G*. Then use the segment addition postulate to write an equation relating the segment lengths. Use algebra skills to find all lengths if $PI = 8y + 4$, $IG = 4y + 8$, and $PG = 15y - 9$.

6. Construct a line parallel to the given line, through point *C.*

