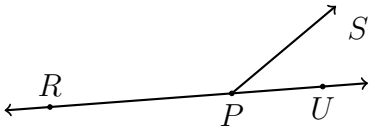
2.4 Homework: Modeling with algebra, "Do Not Solve!"

1. Do Not Solve. Circle the appropriate equation, cite a justification:

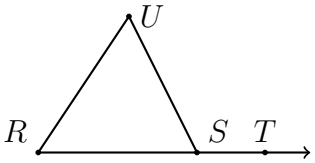
   - "definition of bisector"
   - "linear pairs sum to 180°"
   - "vertical ∠s are ≅"
   - "alternate interior ∠s are ≅"
   - "corresponding ∠s of ∥ lines are ≅"
   - "same-side interior ∠s are supplementary"
   - "⊥ rays with complementary ∠s adding to 90°"

   (a) $\overleftrightarrow{RPU}$ with ray $\overrightarrow{PS}$.

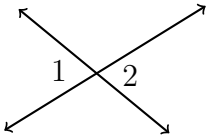
   $\angle RPS \cong \angle SPU$ $m\angle RPS + m\angle SPU = 180°$ _____

   (b) Given $m\angle R = m\angle U = 65$, and $m\angle UST = 130$. Find $m\angle RSU$.

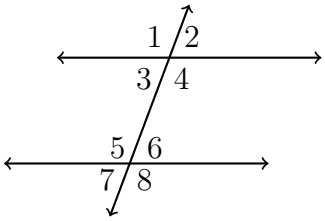
   $\angle UST \cong \angle RSU$ $m\angle UST + m\angle RSU = 180$ _____

   (c) Given $m\angle 1 = 4x + 6$, $m\angle 2 = 6x - 32$. Find $m\angle 1$.

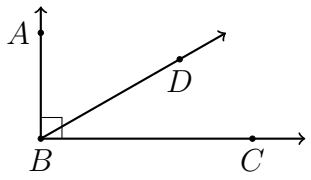
   $\angle 1 \cong \angle 2$ $m\angle 1 + m\angle 2 = 180$ _____

   (d) Given two parallel lines and a transversal, as shown.

   $\angle 4 \cong \angle 5$ $m\angle 3 + m\angle 6 = 180$ _____

(e) Given $\overrightarrow{BA} \perp \overrightarrow{BC}$, $m\angle ABD = 2x-5$, and $m\angle DBC = x-10$.



$\angle ABD \cong \angle DBC$ $\quad$ $m\angle ABD + m\angle DBC = 90$ $\quad$ _____