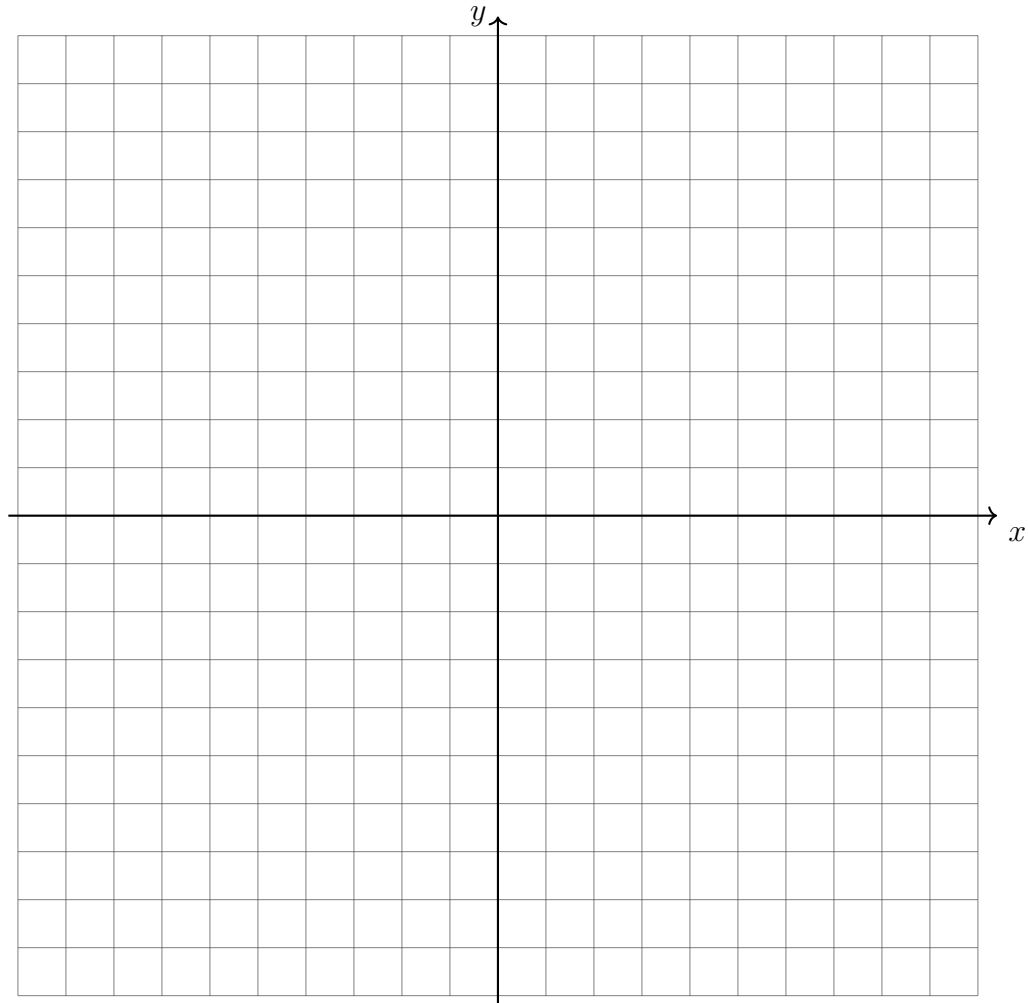


1.12 Do Now: Graphing inequalities

1. Graph and label the two inequalities.

$$y < x - 1$$

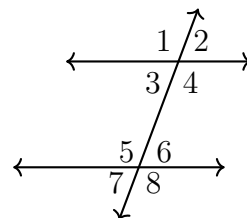
$$\frac{1}{2}x + y \geq 2$$



Mark the solution area with an “S”.

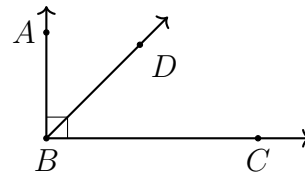
2. Do Not Solve. Circle the appropriate equation, cite a justification:

- “vertical \angle s are \cong ”
- “definition of bisector”
- “linear pairs sum to 180° ”
- “triangle external angle theorem”
- “corresponding \angle s of \parallel lines are \cong ”
- “alternate interior \angle s are \cong ”
- “same-side interior \angle s are supplementary”



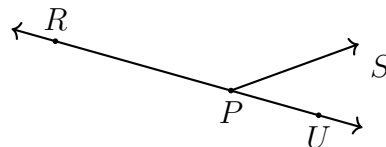
(a) Given two parallel lines intersect a transversal, as shown.

$$\angle 2 \cong \angle 6 \quad m\angle 2 + m\angle 6 = 180 \quad \underline{\hspace{2cm}}$$



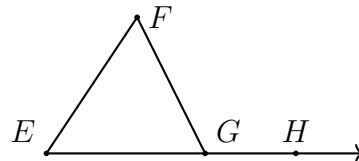
(b) Given $\overrightarrow{BA} \perp \overrightarrow{BC}$, with \overrightarrow{BD} bisecting $\angle ABC$.

$$\angle ABD \cong \angle DBC \quad m\angle ABD + m\angle DBC = 180 \quad \underline{\hspace{2cm}}$$



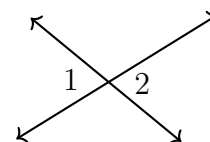
(c) \overleftrightarrow{RP} with ray \overrightarrow{PS} .

$$\angle RPS \cong \angle SPU \quad m\angle RPS + m\angle SPU = 180^\circ \quad \underline{\hspace{2cm}}$$



(d) Given $\triangle EFG$, with side extended as \overrightarrow{EGH} .

$$\angle E \cong \angle F \quad m\angle E + m\angle F = m\angle FGH \quad \underline{\hspace{2cm}}$$



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

$$\angle 1 \cong \angle 2 \quad m\angle 1 + m\angle 2 = 180 \quad \underline{\hspace{2cm}}$$