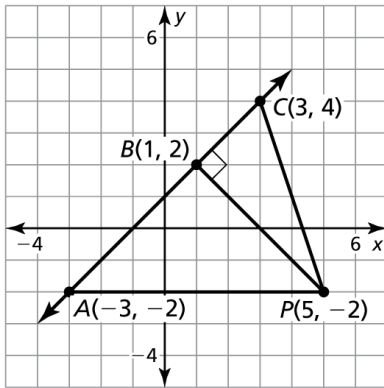


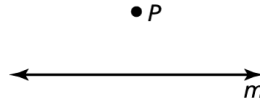
# 3.4

## Practice A

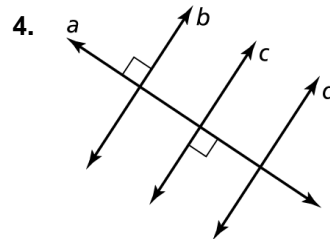
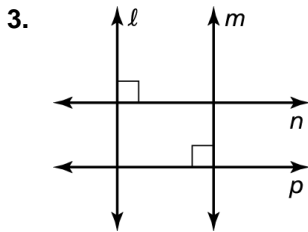
1. Find the distance from point  $P$  to  $\overline{AB}$ .



2. Trace line  $m$  and point  $P$ . Then use a compass and a straightedge to construct a line perpendicular to line  $m$  through point  $P$ .

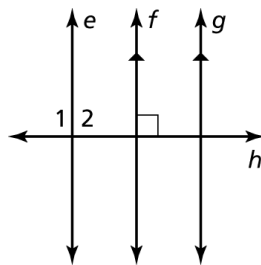


In Exercises 3 and 4, determine which lines, if any, must be parallel. Explain your reasoning.

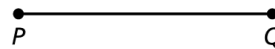


5. **Given:**  $\angle 1 \cong \angle 2$ ,  $f \perp h$   
and  $f \parallel g$

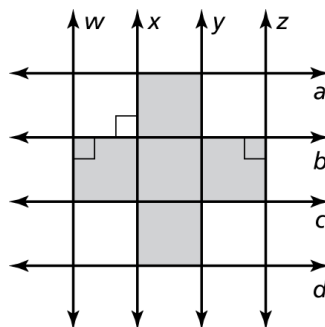
**Prove:**  $e \parallel g$



6. Your friend claims that there is only one line that can be drawn perpendicular to  $\overline{PQ}$ . Is your friend correct? Explain your reasoning.



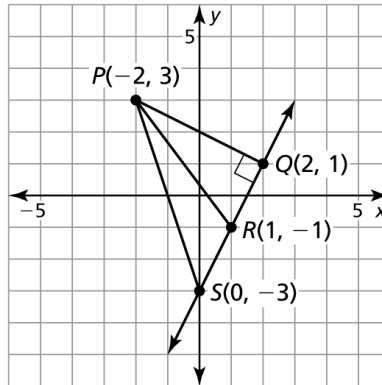
7. Determine which lines must be parallel. Explain your reasoning.



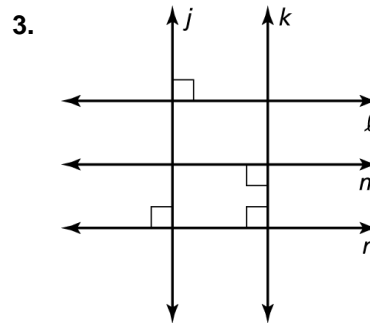
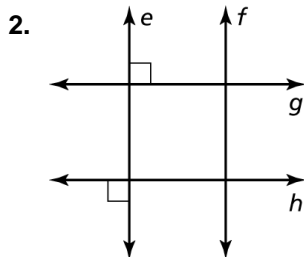
# 3.4

## Practice B

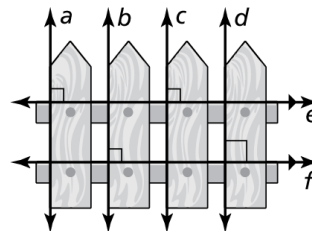
1. Find the distance from point  $P$  to  $QS$ .



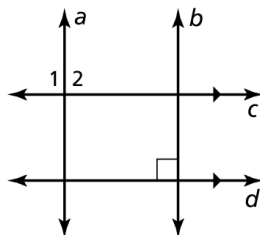
In Exercises 2 and 3, determine which lines, if any, must be parallel. Explain your reasoning.



4. Your friend claims that you have enough information to determine that all of the vertical panels are parallel to each other. Is your friend correct? Explain your reasoning.

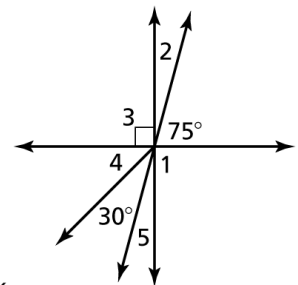


5. **Given:**  $\angle 1 \cong \angle 2$ ,  
 $c \perp d$ , and  
 $b \perp d$



**Prove:**  $a \parallel b$

6. Find all the unknown angle measures in the diagram. Justify your answer for each angle measure.



7. You extend the sides of a regular octagon as shown in the figure. You are given that  $w \perp y$  and  $y \perp z$ . Do you have enough information to conclude that  $x \perp z$ ? Explain.

