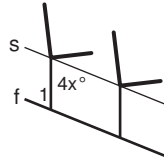


LESSON **Problem Solving**
3-2 **Angles Formed by Parallel Lines and Transversals**

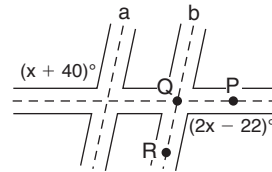
Find each value. Name the postulate or theorem that you used to find the values.

1. In the diagram of movie theater seats, the incline of the floor, f , is parallel to the seats, s .



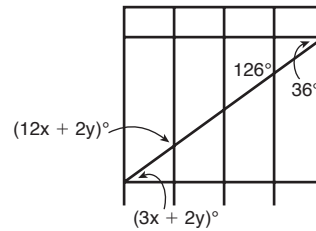
If $m\angle 1 = 68^\circ$, what is x ?

2. In the diagram, roads a and b are parallel.



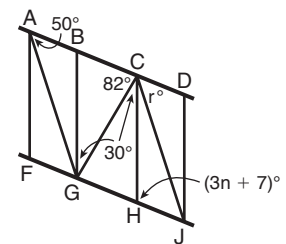
What is the measure of $\angle PQR$?

3. In the diagram of the gate, the horizontal bars are parallel and the vertical bars are parallel. Find x and y .



Use the diagram of a staircase railing for Exercises 4 and 5. $\overline{AG} \parallel \overline{CJ}$ and $\overline{AD} \parallel \overline{FJ}$. Choose the best answer.

4. Which is a true statement about the measure of $\angle DCJ$?
- A It equals 30° , by the Alternate Interior Angles Theorem.
 - B It equals 30° , by the Corresponding Angles Postulate.
 - C It equals 50° , by the Alternate Interior Angles Theorem.
 - D It equals 50° , by the Corresponding Angles Postulate.



5. Which is a true statement about the value of n ?
- F It equals 25° , by the Alternate Interior Angles Theorem.
 - G It equals 25° , by the Same-Side Interior Angles Theorem.
 - H It equals 35° , by the Alternate Interior Angles Theorem.
 - J It equals 35° , by the Same-Side Interior Angles Theorem.