

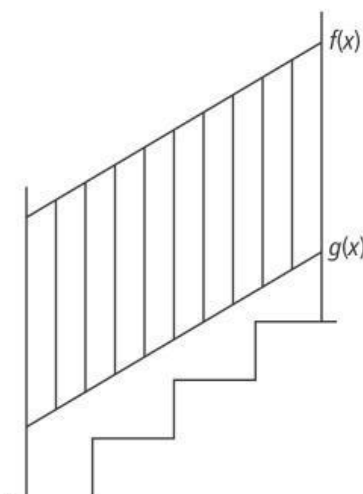


7-4 Additional Practice

Slopes of Parallel and Perpendicular Lines

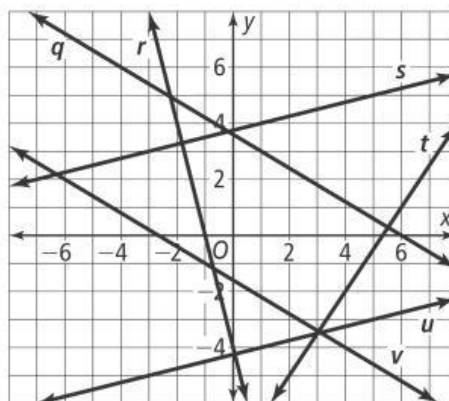
1. A hand rail is installed along the stairs of a new house as shown in the figure. The table shows the distance, in inches, of the top rail $f(x)$ and bottom rail $g(x)$ from the floor for the middle of each numbered step x . Determine the slope of each rail. Are the top and bottom rails parallel?

x	$f(x)$	$g(x)$
1	9	43
2	16	50
3	23	57



Use the figure for Exercises 2–9. Determine whether each pair of lines are parallel or perpendicular. Write *yes* or *no*.

- q and v , parallel
- r and s , parallel
- r and t , parallel
- s and u , parallel
- q and s , perpendicular
- q and v , perpendicular
- r and s , perpendicular
- t and v , perpendicular



Write the equations for the line parallel and the line perpendicular to the given line passing through the given point.

- $y = 2x + 7$; $(0, 1)$
- $y = -\frac{1}{3}x + 2$; $(3, 5)$
- $y = -5x - \frac{1}{2}$; $(-4, 2)$