8.6 Parallel and Perpendicular Lines

- **Parallel**: Lines that have the same slope

- **Perpendicular**: Lines \( \perp \) that have negative reciprocals for slopes

\[
\begin{align*}
y + 5 &= 6(x - 8) \\
y - 2 &= 3(x + 7) \\
y + 5 &= 6(x - 8) \\
y &= 6x - 10 \\
y &= -\frac{1}{3}x - 10 \\
y &= -\frac{1}{3}x - 10
\end{align*}
\]

(2, 1) and (7, 3) with (10, 1) and (8, 6)

(3, -2) and (3, 7) with (-4, 2) and (4, 2)
(2, -5) parallel to \( y + 5 = 6(x - 8) \)

(2, -5) perpendicular to \( y + 5 = 6(x - 8) \)

(2, -5) parallel to \( y = 3 \)

(2, -5) perpendicular to \( y = 3 \)

(2, -5) parallel to \( x = -8 \)

(2, -5) perpendicular to \( x = -8 \)