What is the equation of a line passing through $(2; -1)$ and parallel to the line represented by the equation $y = 2x + 1$.

Solution:

We'll use an equation for the straight line in point/slope form:

$$y - y_0 = k(x - x_0).$$

In our case we have $x_0 = 2$, $y_0 = -1$. The slope of the straight line represented by the equation $y = 2x + 1$ is 2. Since parallel straight lines have equal slopes then $k = 2.$ Thus

$$y - (-1) = 2(x - 2),$$

$$y + 1 = 2x - 4,$$

$$y = 2x - 5.$$

Answer:

$$y = 2x - 5.$$