## Exercise 20

Find the equation of a line with a $y$-intercept of $(0,2)$ and slope $-\frac{1}{2}$.

## Solution

Use the point-slope formula to obtain the equation of the line.

$$
\begin{gathered}
y-2=-\frac{1}{2}(x-0) \\
y-2=-\frac{1}{2} x \\
y=-\frac{1}{2} x+2
\end{gathered}
$$

