Finding the Equation of a Line Given the Slope
and a Point

Recall: $y = ax + b$ ←——— y-intercept
↗
slope

Example: Find the equation of a line with a
slope of 2 passing through the point
(2,3).

Solution:
1. Write y=ax+b
2. Substitute "a"
3. Plug in the point given to solve for "b"
4. Write equation $a = 2$ $A(2,3)$
                                              x y

1. $y = ax + b$

2. $y = 2x + b$

3. $3 = 2(2) + b$
   $3 = 4 + b$
   $b = -1$
   $y = 2x - 1$

State the equation in general form.

$2x - y - 1 = 0$