

## Recall: Stacking Paper

How can we find the equation of this situation given only these two images?


Sec. 5.5 - Equations Given Slope and a Point

- You can find the equation of a line if you know the slope and one other point. Steps:

1. Substitute the given slope for ' $m$ ' and the coordinates of the point for $(\boldsymbol{x}, \boldsymbol{y})$ in the equation $\boldsymbol{y}=\boldsymbol{m} \boldsymbol{x}+\boldsymbol{b}$.
2. Solve for `b` which is the only unknown variable.
3. Substitute the values of $\boldsymbol{m}$ and $\boldsymbol{b}$ into slope/y-intercept form, $y=m x+b$

Example \#1: Find the equation of a line with a slope of 2 and passes through point $(1,5)$.


Example \#2: Find the equation of the line parallel to $x-2 y-4=0$ that passes through the point $(2,-5)$.



