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\text { Math } 131 \text { - Finding equations of lines - Review }
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An equation of a line is usually expressed in one of three forms:

- Slope intercept form: $y=m x+b$; where $m$ is the slope and $b$ is the $y$ intercept
- Standard Form : $\mathrm{Ax}+\mathrm{By}=\mathrm{C}$
- Point-Slope Form: $\mathrm{y}-\mathrm{y}_{1}=\mathrm{m}\left(\mathrm{x}-\mathrm{x}_{1}\right)$ where m is the slope and $\left(\mathrm{x}_{1}, \mathrm{y}_{1}\right)$ is a known point on the line.

Given information about a line, we are often asked to find the line's equation. This can most easily be done using point-slope form, but can also be done using slope intercept form.

For point-slope form, keep in mind, you need two pieces of information.

1) a point on the line, and
2) the slope.

Examples:

1) Find an equation of the line passing through $(4,2)$ and $(-3,7)$
2) Find an equation of the line with $x$ intercept 3 and $y$ intercept -5 .
3) Find an equation of the line passing through $(1,-5)$ and parallel to the line $2 x-5 y=7$
