The following problems ramp up from having a graph provided for you, to you making your own graph, to you doing a problem without the help of a graph.

Level:

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| a) Find the equation of the line with a slope of 1, through the point (5, 4) |
| Identify the slope, and your point: | Sketch: |
| $$m= $$ | $$x= $$ | $$y= $$ |
| Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ |
| Put in your point and solve for “b” |
| Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ |

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| b) Find the equation of the line with a slope of $\frac{1}{3}$, through the point (9, 4) |
| Identify the slope, and your point: | Sketch: |
| $$m= $$ | $$x= $$ | $$y= $$ |
| Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ |
| Put in your point and solve for “b” |
| Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ |

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| c) Find the equation of the line with a slope of 2, through the point (2, 8) |
| Identify the slope, and your point: | Sketch: |
| $$m= $$ | $$x= $$ | $$y= $$ |
| Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ |
| Put in your point and solve for “b” |
| Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ |

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| d) Find the equation of the line with a slope of $\frac{-1}{2}$, through the point (6, 4) |
| Identify the slope, and your point: | Sketch: |
| $$m= $$ | $$x= $$ | $$y= $$ |
| Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ |
| Put in your point and solve for “b” |
| Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ |

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| e) Find the equation of a line that has a slope of 2 and goes through the point (14,4). | f) Find the equation of a line that has a slope of -2 and goes through the point (8, 0). |
| Identify the slope, and your point: | Identify the slope, and your point: |
| $$m= $$ | $$x= $$ | $$y= $$ | $$m= $$ | $$x= $$ | $$y= $$ |
| Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ | Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ |
| Put in your point and solve for “b” | Put in your point and solve for “b” |
| Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ | Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ |

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| e) Find the equation of a line that has a slope of $\frac{1}{2}$ and goes through the point (20,15). | f) Find the equation of a line that has a slope of $\frac{1}{5}$and goes through the point (15,3). |
| Identify the slope, and your point: | Identify the slope, and your point: |
| $$m= $$ | $$x= $$ | $$y= $$ | $$m= $$ | $$x= $$ | $$y= $$ |
| Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ | Put in your slope:$$y=\\_\\_\\_\\_\\_x+b$$ |
| Put in your point and solve for “b” | Put in your point and solve for “b” |
| Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ | Equation: $y=$ \_\_\_\_\_x \_\_\_\_\_\_ |