2.1

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| --- | --- | --- | --- |
| Graph a linear function. | $$y=mx+b$$\*Always graph the y-intercept first! | 1. Graph: $f\left(x\right)= -\frac{2}{3}x+6$graph.bmp | 2. Graph: $-4x+2y=10$graph.bmp |
|  |  | 3. Graph: $f\left(x\right)= -\frac{2}{3}x+6$graph.bmp | 4. Graph: $-4x+2y=10$graph.bmp |
| Graph a linear inequality. | Dashed line: $<or> $Solid line: $\leq or\geq $\*Don’t forget to shade! | 5. Graph: $y<2x-8$graph.bmp | 6. Graph: $2x+3y\geq 9$graph.bmp |
|  |  | 7. Graph: $y<2x-8$graph.bmp |  |
| Identify important characteristics of a function. | x-intercept(s): where the graph crosses the x-axis.y-intercept(s): where the graph crosses the y-axis.maximum/minimum: the highest or lowest points.Domain: input, x-valuesRange: output, y-valuesIncrease: where the graph looks like it’s going “up hill”.Decrease: where the graph looks like it’s going “down hill”.Constant: where the graph is horizontal.End-Behavior: | 8. graph.bmp |   |
| 9. graph.bmp | 10.graph.bmp |
| Calculate the average rate of change. | “slope”$$m=\frac{y\_{2}-y\_{1}}{x\_{2}-x\_{1}}$$ | 11. What is the average rate of change from x=0 to x=4?graph.bmp | 12. Which function has the greater rate of change?Function 1: y = 2x + 3Function 2: (0, 4), (1, 8), (2, 12) |
|  |  | 13. The table to the right shows the distance (in meters) Runner A and Runner B ran at different time intervals. Which runner has a faster average speed from 20 to 31 seconds? |  |



14. Identify the slope and y-intercept of the following then graph

 y = 2x – 3 m =\_\_\_\_\_\_\_\_\_\_ b = \_\_\_\_\_\_\_\_\_\_\_

15. Graph 2x – 4y < 8

16. Find the slope for the following 2 point (2, 4) and (5, 7)

17. Write the equation of the line going through the point (-2, 4) and (3, -2)