Graph equations 1-3 on the same graph given to the right.
Given equation: $y=2 x+3$

1. $y=2 x+4$
2. $y=2 x+5$
3. $y=2 x+6$
4. What was the effect on the graph as the equation changed?


Graph equations 5-7 on the same graph given to the right.
Given equation: $y=2 x+2$
5. $y=3 x+2$
6. $y=4 x+2$
7. $y=5 x+2$
8. What was the effect on the graph as the equation changed?


Graph equations 9-12 on the same graph given to the right.
Given equation: $y=2 x+5$
9. $y=x+5$
10. $y=5$
11. $y=-x+5$
12. $y=5 x+5$


## Graph equations 13-15 on the same graph given to the right.

Given equation: $f(x)=x+2$
13. $f(x)=x+1$
14. $f(x)=x$
15. $f(x)=x-1$


Graph equations 16-18 on the same graph given to the right.
Given equation: $f(x)=-x+3$
16. $f(x)=-x+2$
17. $f(x)=-x+1$
18. $f(x)=-x$

19. What effect does decreasing the $y$-intercept have on the graph of the equation $f(\boldsymbol{x})=\mathbf{- 2 x}+\mathbf{5}$ ?
20. Given the equation $\boldsymbol{f}(\boldsymbol{x})=\mathbf{5 x + 7}$, which of the following equations has a graph with a steeper slope? (There may be more than one correct answer)
A. $f(x)=6 x+7$
B. $f(x)=5 x+8$
C. $f(x)=-4 x+7$
D. $f(x)=7 x+5$
21. Given the equation $\boldsymbol{f}(\boldsymbol{x})=-\mathbf{3 x}+\mathbf{2}$, if the line shifts up by 5 units what is the new equation of the line? Then, graph the new equation.

New Equation: $\qquad$

22. Given the equation $\boldsymbol{f}(\boldsymbol{x})=\frac{\mathbf{3}}{\mathbf{4}} \boldsymbol{x}-\mathbf{2}$, if the slope remains the same and the $y$-intercept increases by 6 units what is the new equation of the line?

23. Starting with Line C and going to Line D , which part of the equation changed?

$$
m \quad \text { or } \quad b
$$

24. How does the slope change from Line $C$ to Line $D$ ?
increase or decrease
