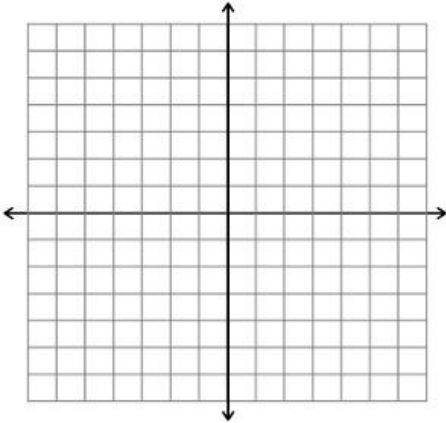


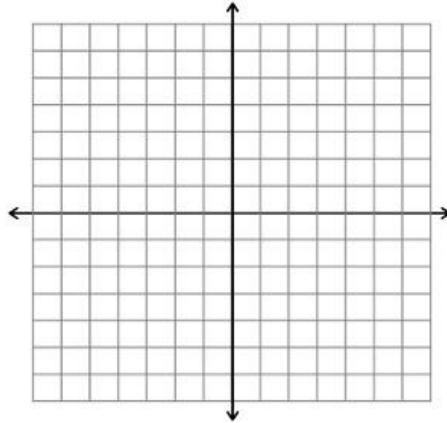
12-3: Slope-Intercept Form Worksheet

Sketch the graph of each line.

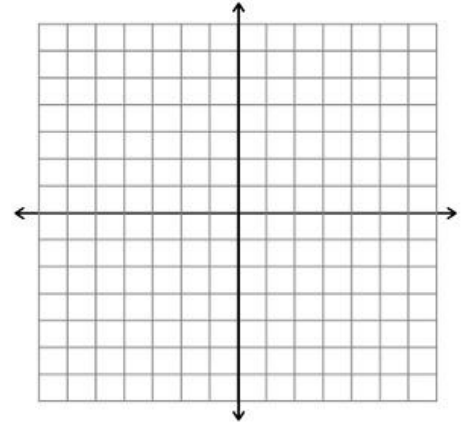
1. $y = \frac{1}{4}x - 1$



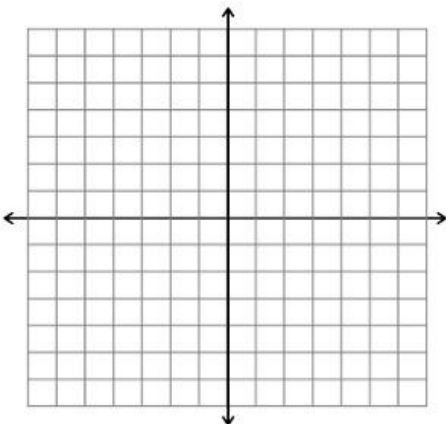
2. $y = -x + 2$



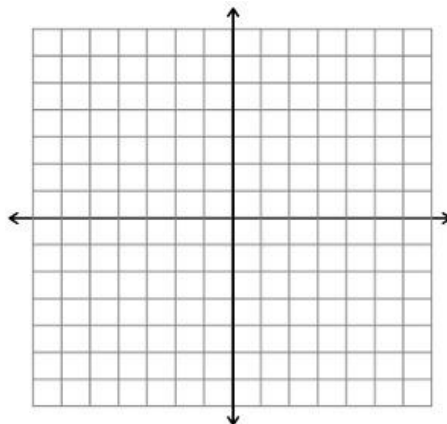
3. $y = x + 1$



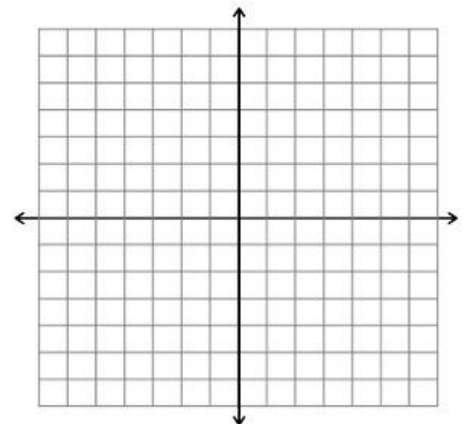
4. $y = \frac{4}{3}x - 4$



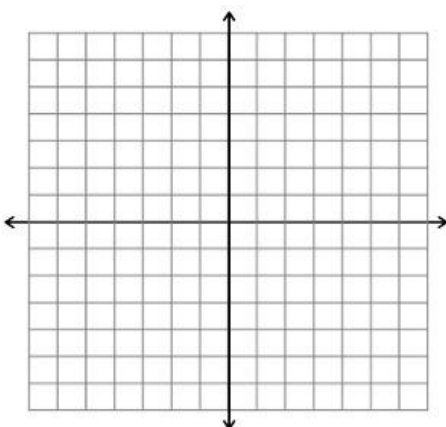
5. $y = -3x - 3$



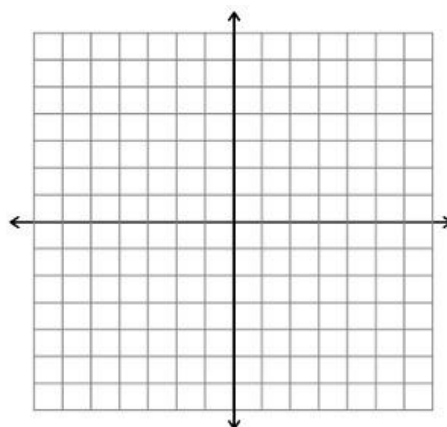
6. $y = 4$



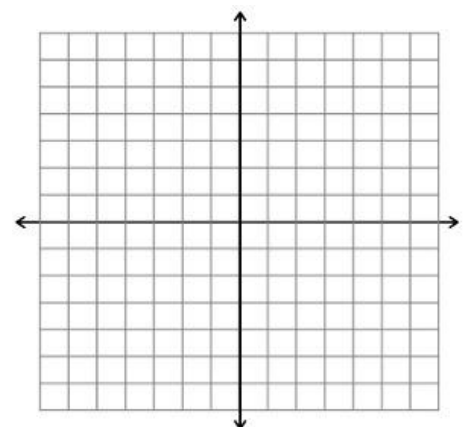
7. $y = \frac{3}{5}x - 1$



8. $x = 5$



9. $y = 3$



Name _____ Class _____

Find the equation of the line that has given slope and y-intercept.

10. $m = 2$ and $b = 7$ 11. $m = -3$ and $b = 10$ 12. $m = 10$ and $b = -3$ 13. $m = -7$ and $b = 11$
14. $m = 4$ and $b = -20$ 15. $m = -12$ and $b = -8$ 16. $m = 6$ and $b = 6$ 17. $m = -5$ and $b = -10$

Find the equation of the line with the given slope that passes through the given point.

18. $m = 2$ and $(-1, 5)$ 19. $m = -4$ and $(1, 1)$ 20. $m = -2$ and $(-2, -2)$ 21. $m = 6$ and $(2, 0)$
22. $m = 3$ and $(0, 7)$ 23. $m = -1$ and $(4, 5)$ 24. $m = 1$ and $(-2, 5)$ 25. $m = 0$ and $(10, 7)$

26. **Explain why you cannot use $y = mx + b$ to find the equation of a vertical line.**

27. **Correct the Error:** There is an error in the student work shown below:

Question: Find the equation of the line that passes through the points $(-1, 4)$ and $(2, 7)$.

Solution: The slope is given by the formula rise over run.

$$\frac{7 - 4}{2 - (-1)} = \frac{3}{3} = 1$$

Plug into $y = mx + b \rightarrow y = mx + 1.$

Substitute $(-1, 4)$ to solve for $m \rightarrow 4 = -1 \cdot m + 1$ so $m = -3$

The equation of the line is $y = -3x + 1.$

What is the error? Explain how to solve the problem.
