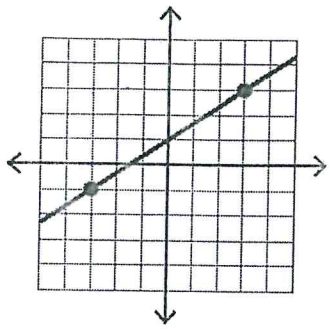
MPM 1D – Graphs and Equations of Lines

Name: _____

Find the equation of each line in either the form $y = mx + b$ or $y = a + bx$.

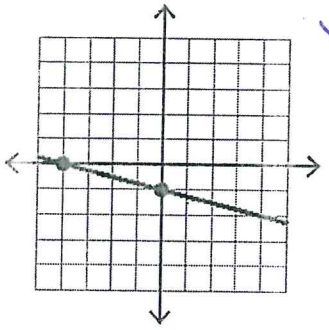
In both cases, you will need the slope and y-intercept.

1.



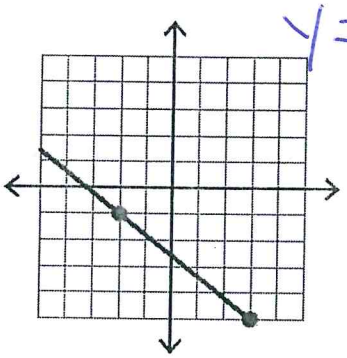
$y = \frac{2}{3}x + 1$

2.



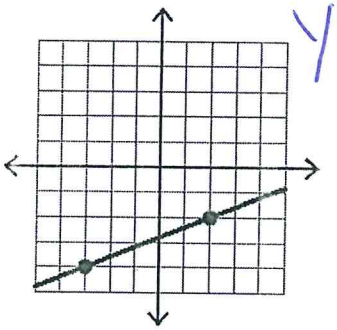
$y = -\frac{1}{4}x - 1$

3.



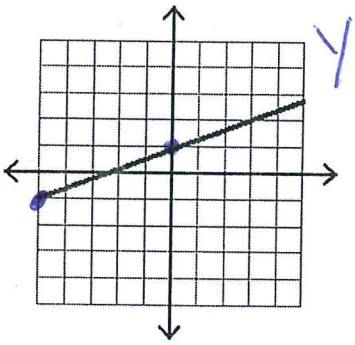
$y = -\frac{4}{5}x - 2.5$

4.



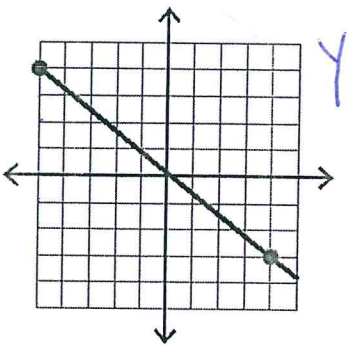
$y = \frac{2}{5}x - 2.8$

5.



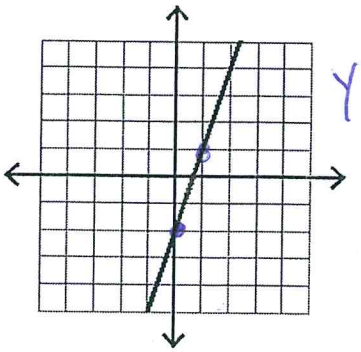
$y = \frac{2}{5}x + 1$

6.



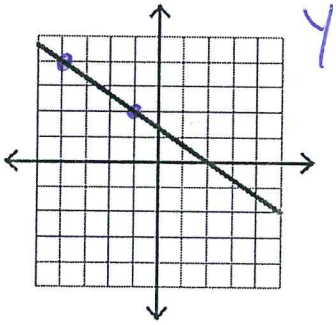
$y = \frac{-7}{9}x$

7.



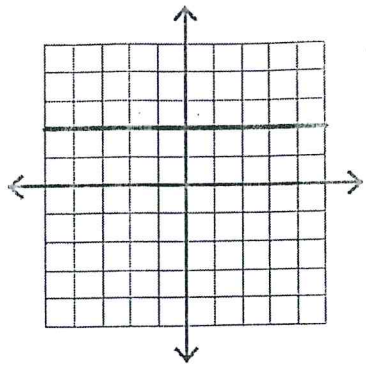
$y = 3x - 2$

8.



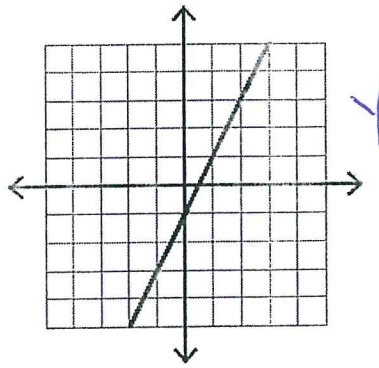
$y = -\frac{2}{3}x + 1.5$

9.



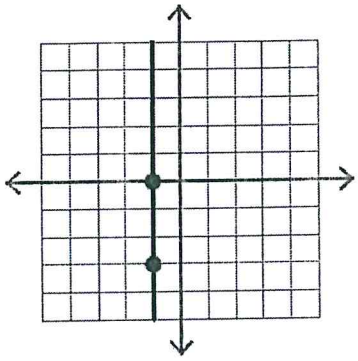
$y=2$

10.



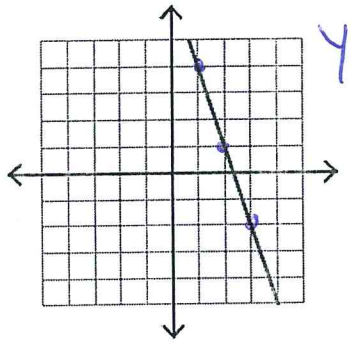
$y=2x-1$

11.



$x=-1$

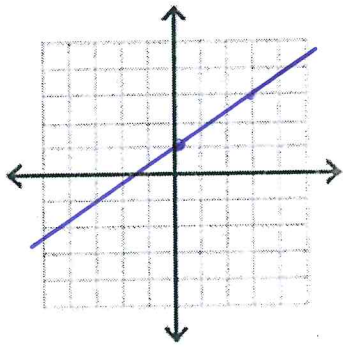
12.



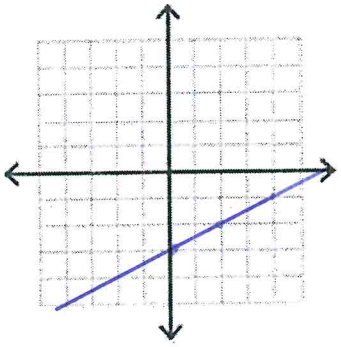
$y=-3x+7$

Graph each line. Start with the y-intercept, then use the slope to find other points.

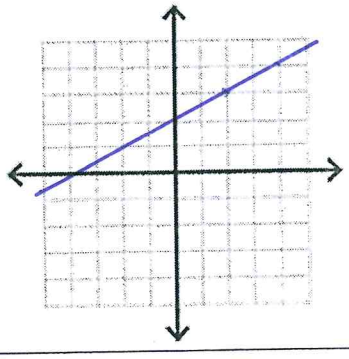
13. $y=\frac{2}{3}x+1$



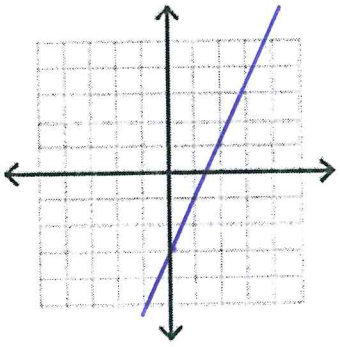
14. $y=\frac{1}{2}x-3$



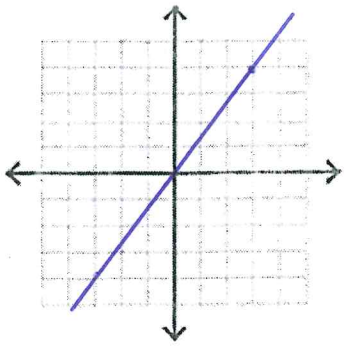
15. $y=2+\frac{1}{2}x$



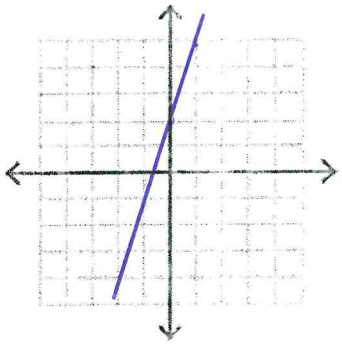
16. $y=-3+2x$



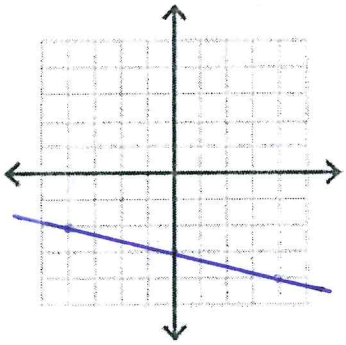
17. $y = \frac{4}{3}x$



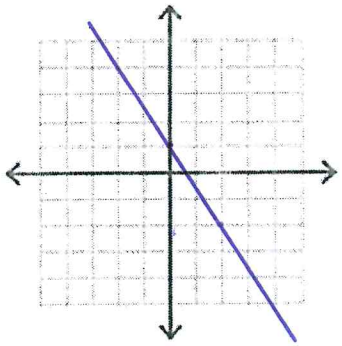
18. $y = 3x + 2$



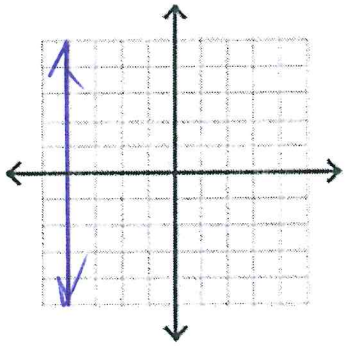
19. $y = -\frac{1}{4}x - 3$



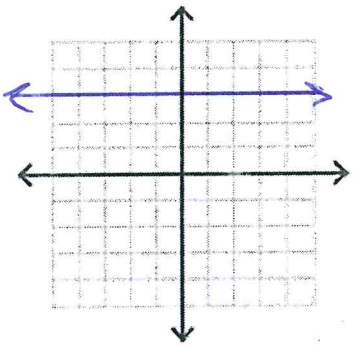
20. $y = -\frac{3}{2}x + 1$



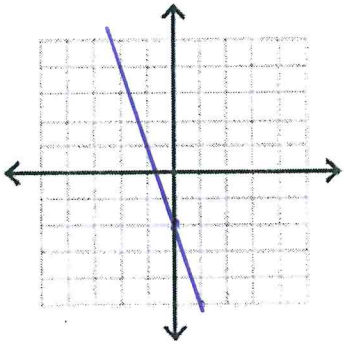
21. $x = -4$



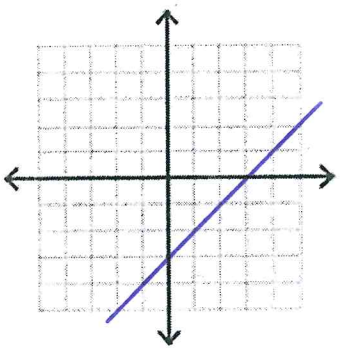
22. $y = 3$



23. $y = -3x - 2$



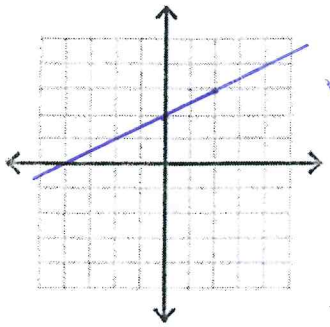
24. $y = x - 3$



Find the equation of a line that:

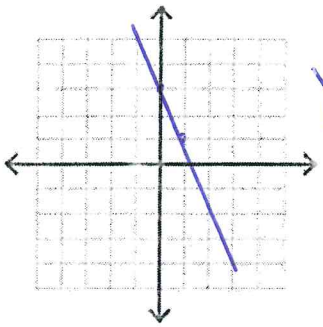
$$slope = m = \frac{rise}{run} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\Delta y}{\Delta x}$$

25. Has a y-intercept of 2, and passes through the point (2,3)



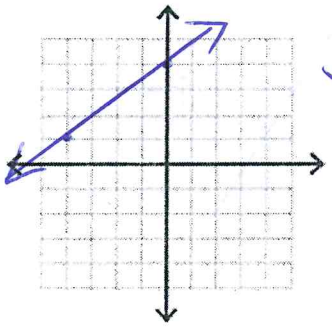
$y = \frac{1}{2}x + 2$

26. Has a y-intercept of 3, and passes through the point (1, 1)



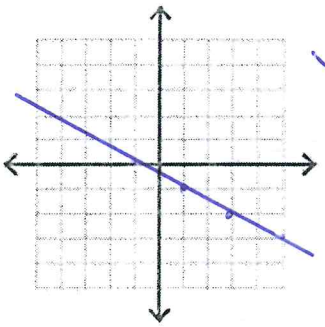
$y = -2x + 3$

27. Has a slope of $\frac{3}{4}$, and passes through the point (–4, 1)



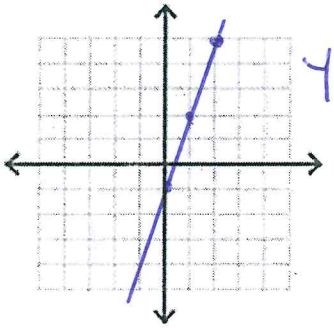
$y = \frac{3}{4}x + 4$

28. Has a slope of $-\frac{1}{2}$, and passes through the point (3, –2)



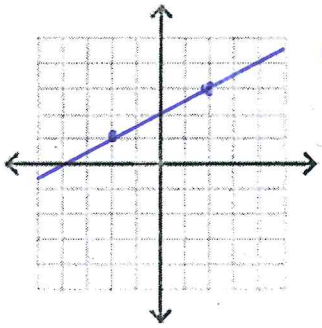
$y = -\frac{1}{2}x - 0.5$

29. Has a slope of 3, and passes through the point (2, 5)



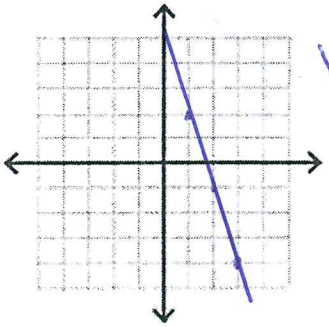
$y = 3x - 1$

30. Passes through the points (–2, 1) and (2, 3)



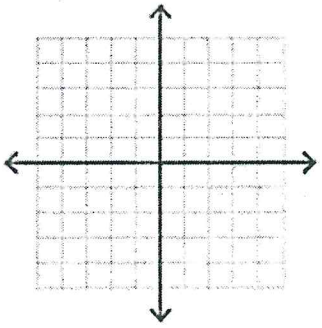
$y = \frac{1}{2}x + 2$

31. Passes through the points (1, 2) and (3, –4)



$y = -3x + 5$

32. Passes through the points (1, 4) and (8, 18)



$y = 2x + 2$