Homework: Linear Functions and Slope

In Problems 1-5, find the slope of the line passing through each pair of points or state that the slope is undefined

1. $(2,3)$ *and* $(8,11)$	2. $(-1,5)$ *and* $(4,2)$
3. $(7,8)$ *and* $(2,8)$	4. $(-9,-2)$ *and* $(-1,8)$
5. $(-1,2)$ *and* $(-1,4)$	

In Problems 6-19, use the given conditions to write an equation for each line in slope-intercept form

6. $Slope = 3$, passing through $(5,1)$	7. $Slope = 5$, passing through $(2,-1)$
8. $Slope = -2$, passing through $(-3,-4)$	9. $Slope = -5$, passing through $(-5,0)$
10. $Slope = -2$, passing through $\left(\frac{1}{3},-3\right)$	11. $Slope = \frac{-2}{3}$, passing through origin
12. $Slope = \frac{2}{5}$, passing through $(4,-3)$	13. passing through $(9,1)$ and $(6,10)$
14. passing through $(5,0)$ and $(0,-5)$	15. passing through $(-2,-1)$ and $(8,-4)$
16. passing through $(-9,-1)$ and $(6,2)$	17. passing through $(8, 2)$ and $(-4, 0)$
18. passing through $(-2,3)$ with x - intercept $= 4$	19. x - intercept $= -5$ and y - intercept $= -2$

In Problems 20-24, give the slope and y-intercept of each line whose equation is given. Then graph the linear function

20. $y = 3x - 5$	21. $y = -x + 2$
22. $y = \frac{1}{2}x - 1$	23. $y = \frac{3}{5}x$
24. $y = \frac{-2}{3}x + 4$	

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In Problems 25-29, graph each equation in a rectangular coordinate system

25. $x = -4$	26. $y = 1$
27. $x = 0$	28. $f(x) = 5$
29. $5x - 20 = 0$	

In Problems 30-36, graph each linear function

30. $5x - y = 4$	31. $3x + 4y = 12$
32. $9x - 3y - 9 = 0$	33. $4x - 8 = 0$
34. $3x + 2y = 4$	35. $7x - 2y = 8$
36. $9y - 27 = 0$	