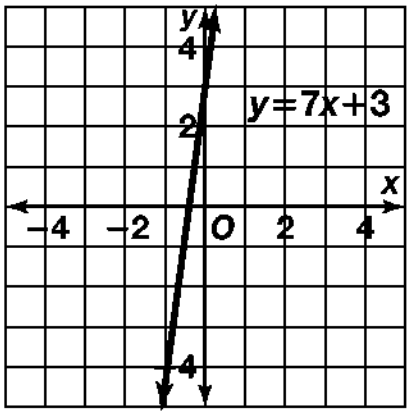
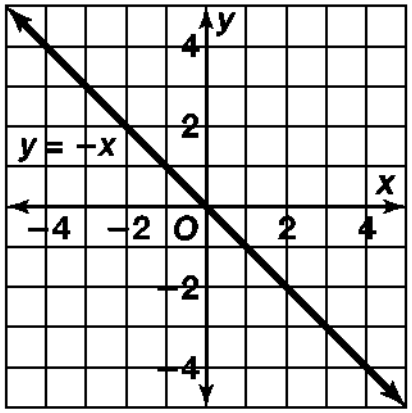
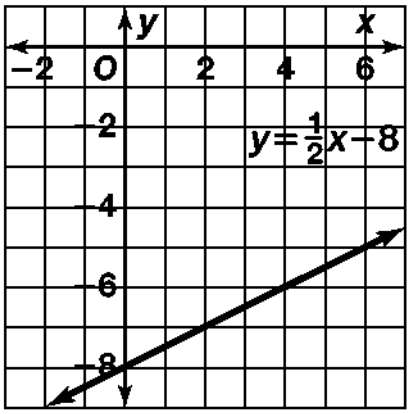
1. $\frac{3}{4}$
2. –1
3. $-\frac{5}{6}$
4. –2
5. –1
6. 2
7. $-\frac{5}{7}$
8. 2
9. undefined
10. 0
11. 7; 3



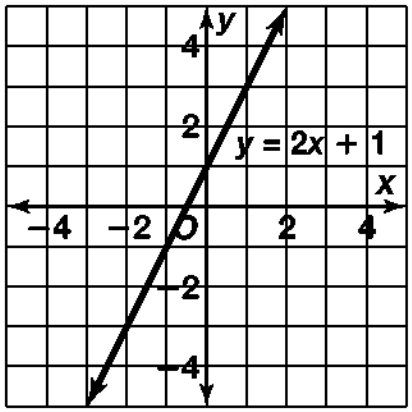
12. –1; 0



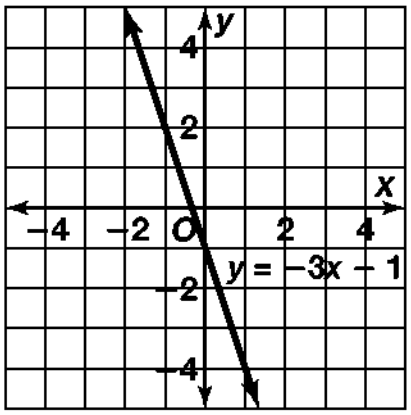
13. $\frac{1}{2}$; -8



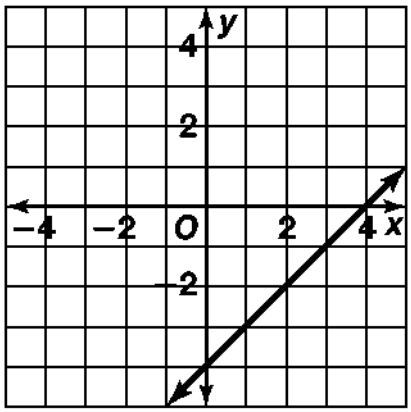
14. 2; 1



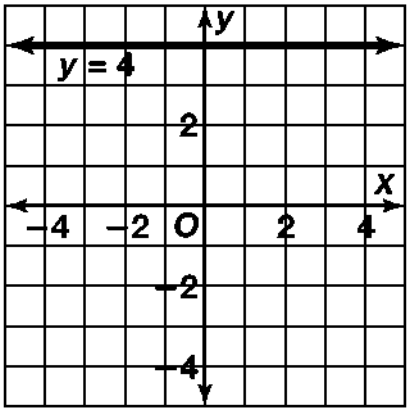
15. –3; –1



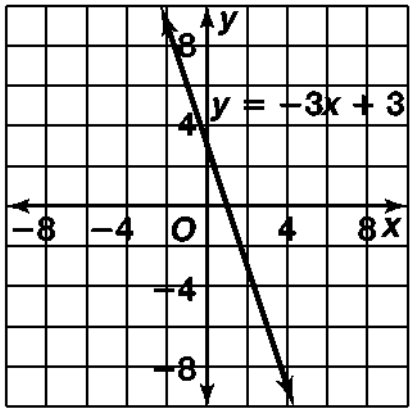
16. 1; –4



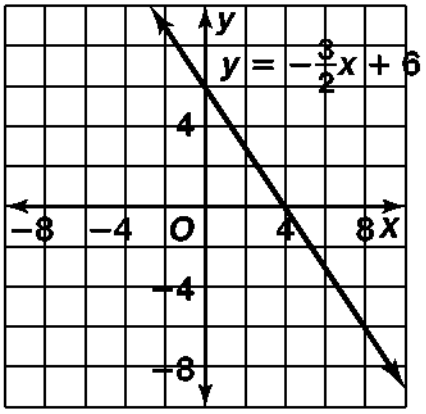
17. 0; 4



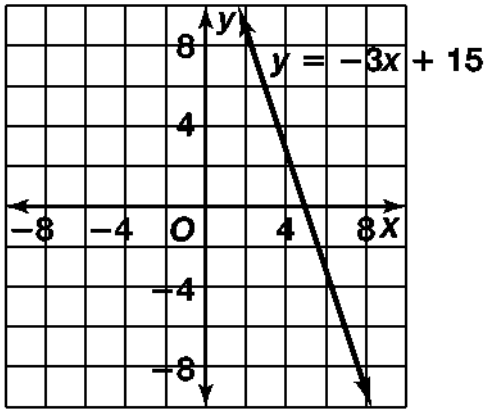
18. –3; 3



19. $-\frac{3}{2}$; 6



20.



21. The student could have calculated $\frac{\text{difference in } x\text{-coordinates}}{\text{difference in } y\text{-coordinates}}$.

22. Answers may vary. Sample: $y = 3$, $y = \frac{1}{2}x + 3$, $y = x + 3$, $y = 2x + 3$, $y = 4x + 3$.

23. $-\frac{1}{3}$

24. 0

25. The upper roof has the steeper pitch because it has the greater slope.

26. C

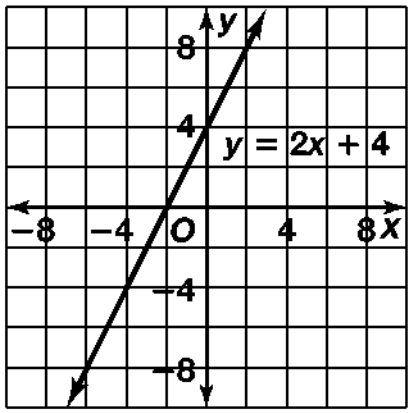
27. 0

28. $-\frac{5}{2}$

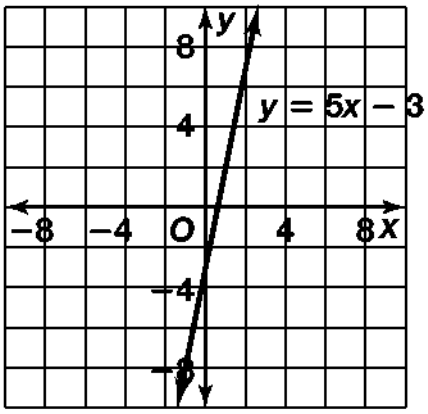
29. undefined

30. –1

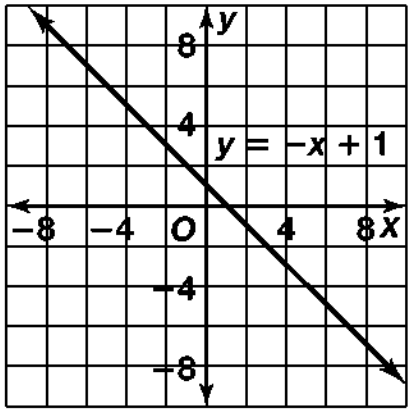
31. $y = 2x + 4$



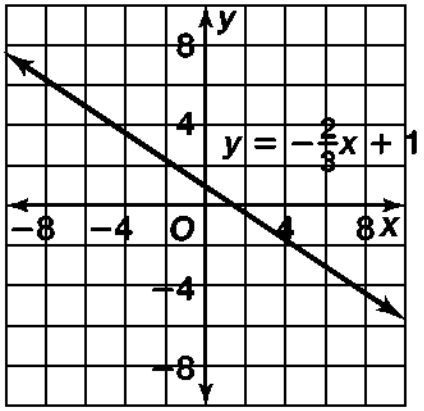
32. $y = 5x - 3$



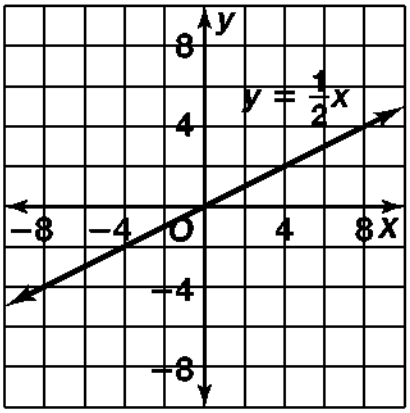
33.



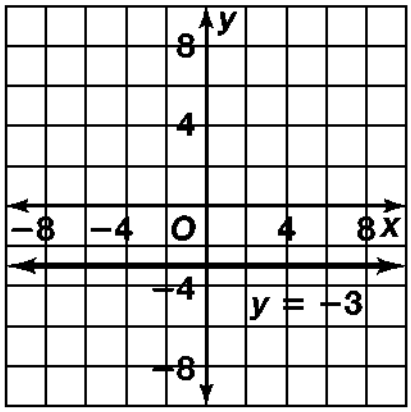
34.



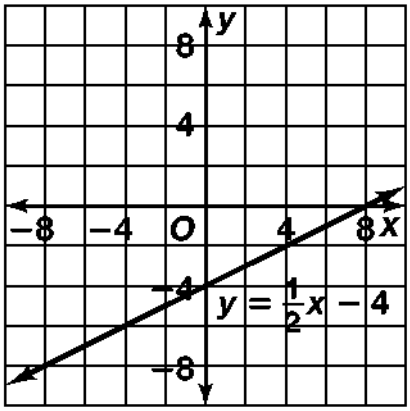
35. $y = \frac{1}{2}x$



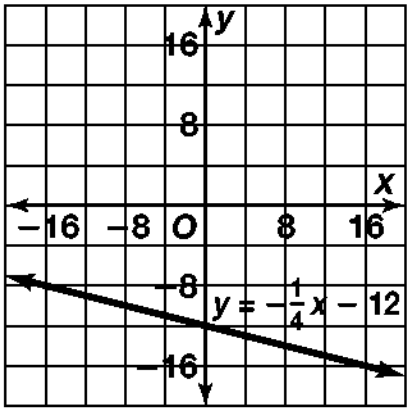
36. $y = -3$



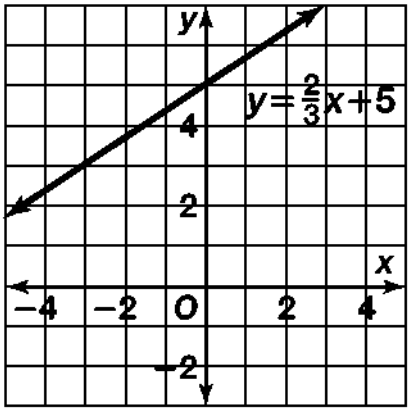
37. $y = \frac{1}{2}x - 4$



38. $y = -\frac{1}{4}x - 12$



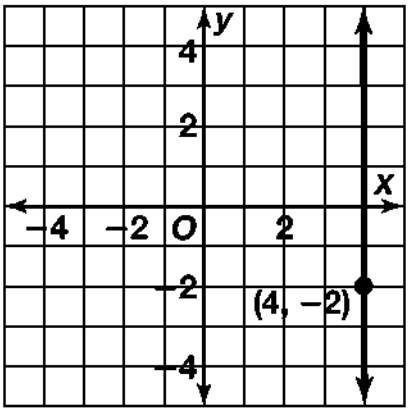
39. $y = \frac{2}{3}x + 5$



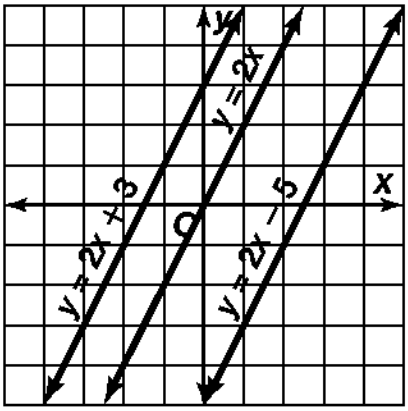
40. no; $4 \neq -2(-3) + 1$

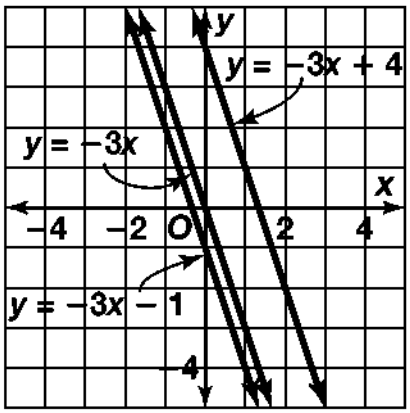
41. yes; $2(-4) - 6(-2) = 4$

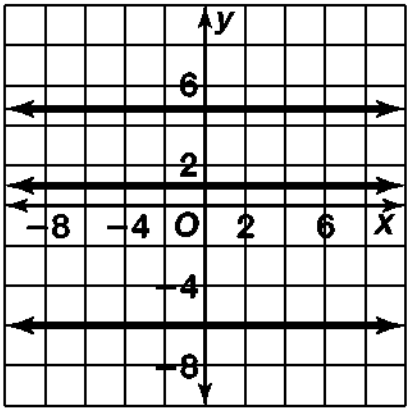
42.



43. a.







b. The lines are parallel. Explanations may vary. Sample: Their $\frac{\text{rise}}{\text{run}}$ ratios are the same, so they never meet.

c. 0

44. $\frac{\text{rise}}{\text{run}} = \frac{4}{100}$. As you "run" 100 ft horizontally, you rise 4 ft vertically.

45. Answers may vary. Sample: $\frac{4-2}{6-3}=\frac{2}{3}$ and $\frac{0-(-2)}{0-(-3)}=\frac{2}{3}$.
Yes, the slope of the line is the same all along it.