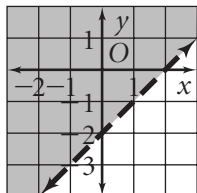


Practice 2-7

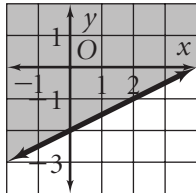
Two-Variable Inequalities

Write an inequality for each graph. In each case, the equation for the boundary line is given.

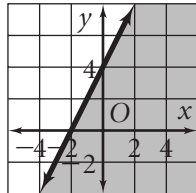
1. $y = x - 2$



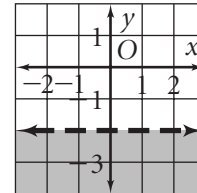
2. $x - 2y = 4$



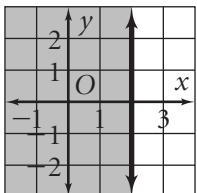
3. $y - 2x = 4$



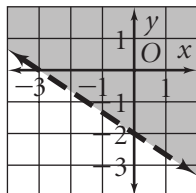
4. $y = -2$



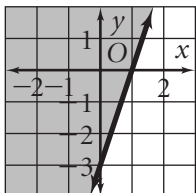
5. $x = 2$



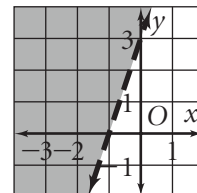
6. $-2x - 3y = 6$



7. $3x - y = 3$



8. $y - 3x = 3$



Graph each inequality on a coordinate plane.

9. $y < x$

10. $y \geq x$

11. $y > 2$

12. $y < 2$

13. $x \leq 2$

14. $x > 2$

15. $y \geq |x|$

16. $y > -2x + 1$

17. $y \geq 3x - 4$

18. $4x + 2y \leq 8$

19. $4x - 2y \leq 4$

20. $4y - 2x \geq 4$

21. $y > |x + 2|$

22. $y \leq |x - 2|$

23. $y > |x| + 2$

24. $y < |x| - 2$

25. $y \leq |4x| + 1$

26. $y \geq \left| \frac{1}{6}x \right| - 3$

27. $y > -\frac{1}{6}x - 1$

28. $3x \leq 5y$

29. You need to make at least 150 sandwiches for a picnic. You are making tuna sandwiches and ham sandwiches.

- Write an inequality for the number of sandwiches you can make.
- Graph the inequality.
- Does the point (90, 80) satisfy the inequality? Explain.

30. A salesperson sells two models of vacuum cleaners. One brand sells for \$150 each, and the other sells for \$200 each. The salesperson has a weekly sales goal of at least \$1800.

- Write an inequality relating the revenue from the vacuum cleaners to the sales goal.
- Graph the inequality.
- If the salesperson sold exactly six \$200 models last week, how many \$150 models did she have to sell to make her sales goal?

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