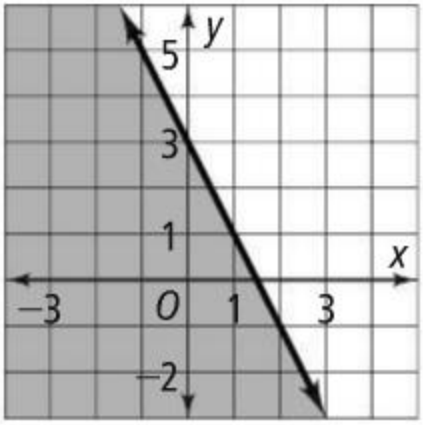
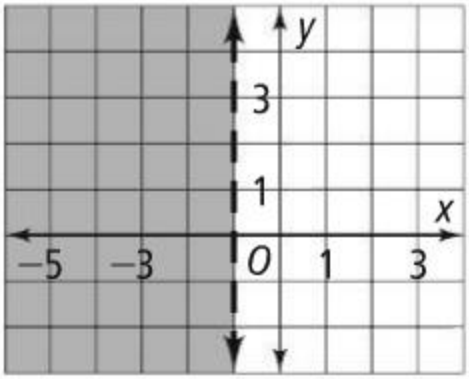
12. No; 4 is not less than 3.

13.



14.

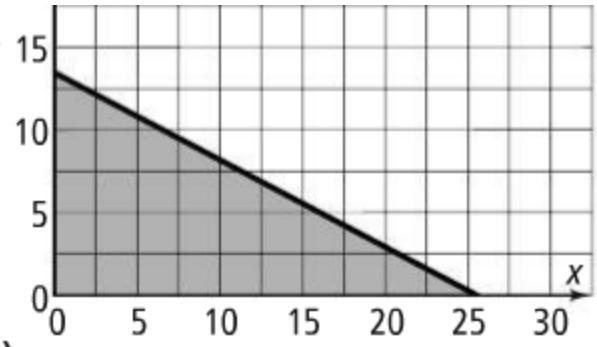


15. $y < \frac{1}{2}x - 1$

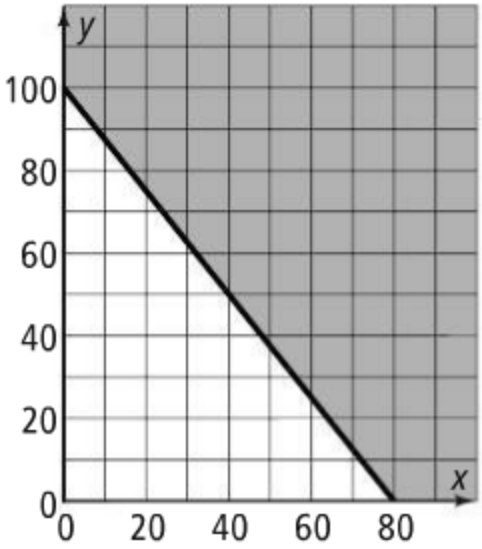
17. Since the inequality is already solved for y, the $<$ symbol means you should shade below the boundary line. All of these shaded points will make the inequality true.

18. $y \geq 5x + 1$

19. $250x + 475y \leq 6400$, where x represents the number of refrigerators and y represents the number of pianos.

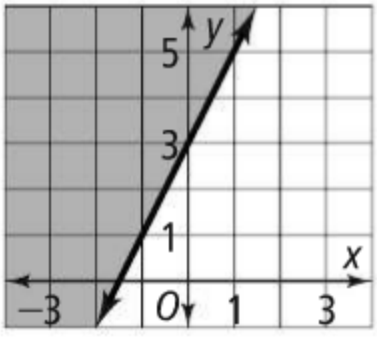


Yes; the point (12, 8) is not in the shaded region; actual solutions include only points representing whole numbers of refrigerators and pianos.



20. a. Let $x =$ hours at the cafe and let $y =$ hours at the market; $10x + 8y \geq 800$.

b. No; the point (30, 60) does not lie in the shaded region of the graph.



21. The student graphed $y \leq 2x + 3$ instead of $y \geq 2x + 3$. The other side of the line should be shaded.

22. You could not use the point (0, 0) in the case that (0, 0) lies on the boundary line. If that were the case, you would have to choose any other point that was not on the boundary line.