NAME _____ DATE _____

Practice 44

FOR USE WITH SECTION 7.5

Graph each system of inequalities.

1. $y < 3$
$y \geq -2$

2. $y \leq x + 1$
$y \geq x - 2$

3. $y \geq \frac{1}{2}x - 3$
$y < -\frac{3}{2}x + 5$

4. $y > -3x + 5$
$y \geq -1$

5. $y < \frac{1}{3}x$
$y \geq \frac{2}{3}x - 4$

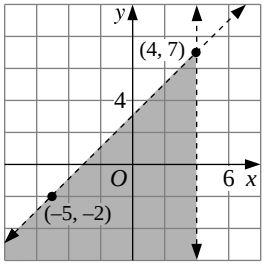
6. $y \geq 2$
$y \leq -3x + 4$

7. $y > x - 2$
$y > 2x - 5$

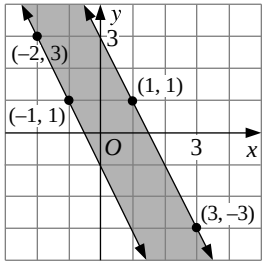
8. $y \leq \frac{1}{2}x - 2$
$y \leq -2x + 3$

Write a system of inequalities defining each shaded region.

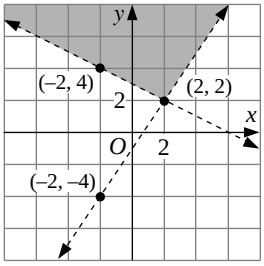
9.



10.



11.



Graph each system of inequalities.

12. $x > -2$
$y < x + 1$
$y \geq \frac{1}{2}x - 1$

13. $y \leq 5$
$x > 1$
$y > 2x - 3$

14. $y < \frac{1}{3}x + 2$
$y > \frac{1}{3}x - 2$
$y > -\frac{2}{3}x$

15. $y \leq 5 - 2x$
$y \leq 5 + x$
$y > 1 - \frac{1}{2}x$

16. The Activities Club and the Dance Committee are jointly sponsoring a dance. The total cost of the dance is expected to be at least \$140. The Activities Club has \$80 in its treasury, and the Dance Committee has \$100, some or all of which can be used to help pay the cost of the dance.

a. Write a system of inequalities to model the conditions on x, the amount to be contributed by the Activities Club, and y, the amount to be contributed by the Dance Committee, toward the cost of the dance.

b. Graph the system of inequalities you wrote in part (a).

17. Open-ended Problem Take a survey of the forearm lengths and ages of some students in your school. Draw a scatter plot of forearm lengths against ages. Enclose the points of the scatter plot in a parallelogram, and give inequalities that describe the interior of the parallelogram.