26. **TAKS REASONING** Which quadrant of the coordinate plane contains no solutions of the system of inequalities?

$$y \leq -|x - 3| + 2$$
$$4x - 5y \leq 20$$

Ⓐ Quadrant I Ⓑ Quadrant II Ⓒ Quadrant III Ⓓ Quadrant IV

27. **TAKS REASONING** Write a system of two linear inequalities that has $(2, -1)$ as a solution.

ABSOLUTE VALUE SYSTEMS **Graph the system of inequalities.**

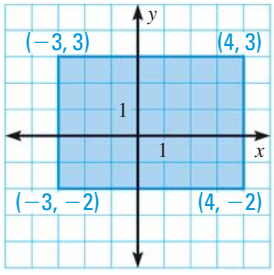
28. $y < |x|$
$y > -|x|$

29. $y \leq |x - 2|$
$y \geq |x| - 2$

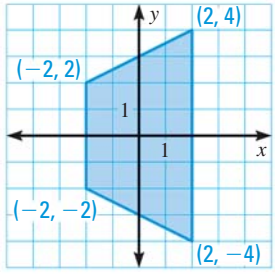
30. $y \leq -|x - 3| + 2$
$y > |x - 3| - 1$

CHALLENGE **Write a system of linear inequalities for the shaded region.**

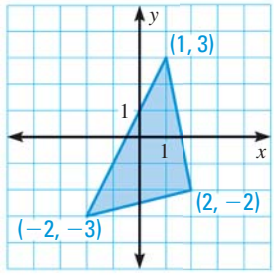
31.



32.



33.



PROBLEM SOLVING

EXAMPLE 4 on p. 170 for Exs. 34–39

34. **SUMMER JOBS** You can work at most 20 hours next week. You need to earn at least $92 to cover your weekly expenses. Your dog-walking job pays $7.50 per hour and your job as a car wash attendant pays $6 per hour. Write a system of linear inequalities to model the situation.

TEXAS @HomeTutor for problem solving help at classzone.com

35. **VIDEO GAME SALE** An online media store is having a sale, as described in the ad shown. Use the information in the ad to write and graph a system of inequalities for the regular video game prices and possible sale prices. Then use the graph to estimate the range of possible sale prices for games that are regularly priced at $20.

TEXAS @HomeTutor for problem solving help at classzone.com

36. **TAKS REASONING** A book on the care of tropical fish states that the pH level of the water should be between 8.0 and 8.3 pH units and the temperature of the water should be between 76°F and 80°F. Let x be the pH level and y be the temperature. Write and graph a system of inequalities that describes the proper pH level and temperature of the water. *Compare* this graph to the graph you would obtain if the temperatures were given in degrees Celsius.

○ = WORKED-OUT SOLUTIONS on p. WS1 = TAKS PRACTICE AND REASONING = MULTIPLE REPRESENTATIONS