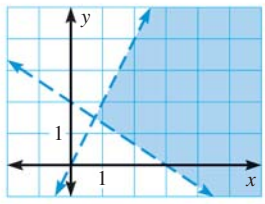
EXAMPLE 2
on p. 467
for Exs. 22–23

22. TAKS REASONING The graph of which system of inequalities is shown?



(A) $y < 2x$
$2x + 3y < 6$

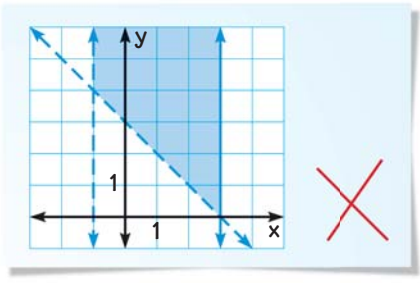
(B) $y < 2x$
$2x + 3y > 6$

(C) $y > 2x$
$2x + 3y < 6$

(D) $y > 2x$
$2x + 3y > 6$

23. ERROR ANALYSIS *Describe* and correct the error in graphing this system of inequalities:

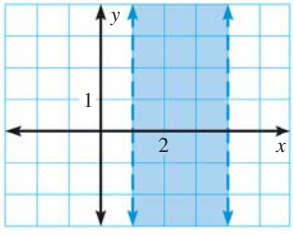
$x + y < 3$ **Inequality 1**
$x > -1$ **Inequality 2**
$x \leq 3$ **Inequality 3**



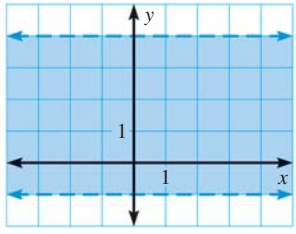
EXAMPLE 3
on p. 467
for Exs. 24–29

WRITING A SYSTEM **Write a system of inequalities for the shaded region.**

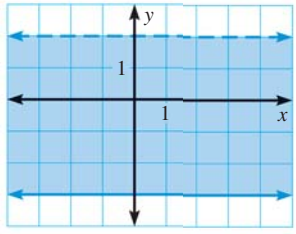
24.



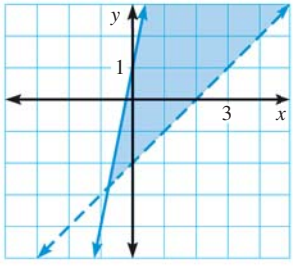
25.



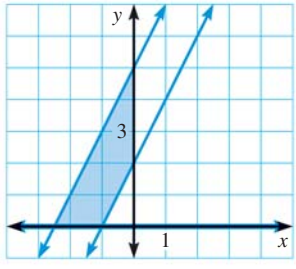
26.



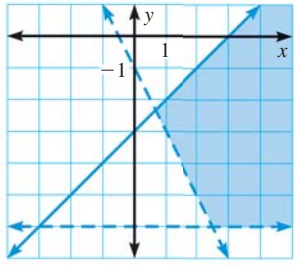
27.



28.



29.



GRAPHING A SYSTEM **Graph the system of inequalities.**

30. $x > 4$
$x < 9$
$y \leq 2$
$y > -2$

31. $x + y < 4$
$x + y > -2$
$x - y \leq 3$
$x - y \geq -4$

32. $x \leq 10$
$3x + 2y \geq 9$
$x - 2y \leq 6$
$x + y \leq 5$

33. TAKS REASONING Does the system of inequalities have any solutions? *Explain.*

$x - y > 5$ **Inequality 1**
$x - y < 1$ **Inequality 2**

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

34. The shaded region is a rectangle with vertices at (2, 1), (2, 4), (6, 4), and (6, 1).

35. The shaded region is a triangle with vertices at (−3, 0), (3, 2), and (0, −2).

= WORKED-OUT SOLUTIONS on p. WS1

= TAKS PRACTICE AND REASONING