Solve each system of equations by graphing.

11. $3x + 4y = 8$
    $x - 3y = -6$

ANSWER:
(0, 2)

12. $x + \dfrac{8}{3}y = 12$
    $\dfrac{1}{2}x + \dfrac{4}{3}y = 6$

ANSWER:
infinitely many solutions

13. $y - 3x = 13$
    $y = \dfrac{1}{3}x + 5$

ANSWER:
(–3, 4)

14. $6x - 14y = 5$
    $3x - 7y = 5$

ANSWER:
no solution

15. **LAWN CARE** André and Paul each mow lawns. André charges a $30 service fee and $10 per hour. Paul charges a $10 service fee and $15 per hour. After how many hours will André and Paul charge the same amount?

ANSWER:
4 hours

Solve each system of equations by using either substitution or elimination.

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

ANSWER:
(2, 4)

17. $5x - 2y = 4$
    $-2y + x = 12$

ANSWER:
(–2, –7)

18. $x + y = 3.5$
    $x - y = 7$

ANSWER:
(5.25, –1.75)

19. $3y - 5x = 0$
    $2y - 4x = -2$

ANSWER:
(3, 5)

20. **SCHOOL SUPPLIES** At an office supply store, Emilio bought 3 notebooks and 5 pens for $13.75. If a notebook costs $1.25 more than a pen, how much does a notebook cost? How much does a pen cost?
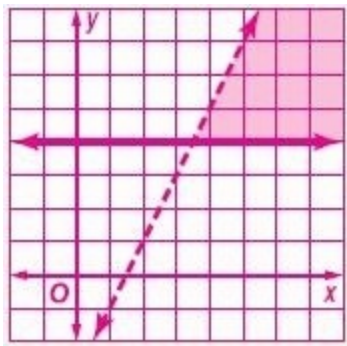
ANSWER:
notebook: $2.50; pen: $1.25

Solve each system of inequalities by graphing.

21.
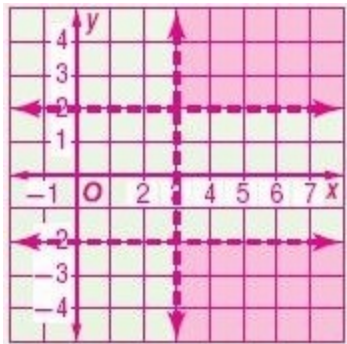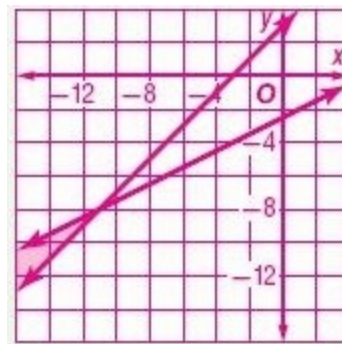$$y < 2x - 3$$
$$y \geq 4$$

ANSWER:

22.
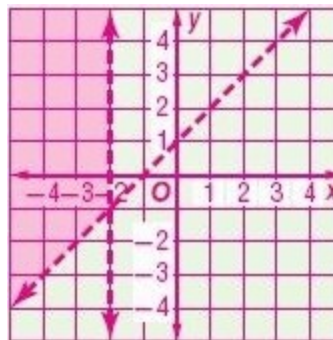$$|y| > 2$$
$$x > 3$$

ANSWER:

23.
$$y \geq x + 3$$
$$2y \leq x - 5$$

ANSWER:

24.
$$y > x + 1$$
$$x < -2$$

ANSWER:

Solve each system of equations.

28.
$$a - 4b + c = 3$$
$$b - 3c = 10$$
$$3b - 8c = 24$$

ANSWER:
$(-23, -8, -6)$

29. $2x - z = 14$
$3x - y + 5z = 0$
$4x + 2y + 3z = -2$

ANSWER:
$(5, -5, -4)$