<u>**DIRECTIONS**</u>

Answers without work to check. If you cannot find your mistake then please seek help EARLY! This assignment is worth 4 pts. 1) did you complete it 2) did you show all the work 3) did you correct in pen 4) did you get 75% of the problems correct?

5.4 pg. 257 answers without work. Check the ones you were supposed to do for your assignment. If you do not get the correct answer, try to find your mistake. If you cannot find your mistake, ask a friend or your teacher for help to better understand the concept for that problem.

Pg. 257

A: 8, 16, 22, 24 – 27, 32, 34

B: 1, 2, 8, 14 – 24 (e), 25 – 27, 34

C: 4 – 26 (e), 33

1. no; Two lines cannot intersect at exactly two points.

2. The graph of a system of linear equations that has infinitely many solutions is a single line and the graph of a system of linear equations that has no solution is two parallel lines.

3. F; no solution

4. E; infinitely many solutions

5. B; infinitely many solutions

6. C; one solution

7. D; no solution

8. A; one solution

9. $(0, -4)$

10. no solution

11. infinitely many solutions

12. no solution

13. infinitely many solutions

14. infinitely many solutions

15. no solution

16. $(3, 7)$

17. infinitely many solutions; The lines have the same slope and the same y-intercept, so they are the same line.

18. no solution; The lines have the same slope but different y-intercepts, so they are parallel.
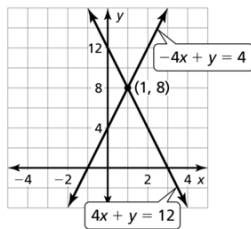
19. one solution; The lines have different slopes, so they will intersect.

20. no solution; The lines have the same slope but different y-intercepts, so they are parallel.

21. no solution; The lines have the same slope but different y-intercepts, so they are parallel.

22. one solution; The lines have different slopes, so they will intersect.

23. The lines are not parallel, so they must intersect.

(1, 8)

24. The lines have the same slope but different y-intercepts, so the system has no solution.

25. $3f + 4a = 6$ and $\frac{9}{2}f + 6a = 9$; infinitely many solutions

26. $d = 6t + 2$ and $d = 6t$; no; The system has no solution.

27. yes; The system of equations $150c + 80b = 22{,}860$ and $170c + 100b = 27{,}280$ has a solution.

28. *Sample answer:* $y = 2x$, $y = \frac{1}{2}x$, and $y = -x + 6$

29. one; The lines have different slopes, so they will intersect at exactly one point.

30. a. *Sample answer:* 40 m
    b. yes; The lines that represent Team A and Team C's runners have different slopes, so they will intersect.
    c. no; The lines that represent Team A and Team B's runners have the same slope, so they will never intersect.

31. a. never; The y-intercepts are different, so they can never be equations for the same line.
    b. sometimes; When $a = b$, the lines are parallel and there is no solution.
    c. always; When $a < b$, the slopes are different and the lines intersect at one point.

32. no; The system $3x + 2y = 38$ and $15x + 10y = 190$ has infinitely many solutions.

33. $x = -6$, $x = -2$

34. $x = -5$, $x = 3$