

Chapter 10

Elementary Algebra, Norco Edition Answers to Odd Exercises

Section 10.1

Error alert: In #39, the coefficient of x^2 should be 8, not 12: $2x^3 - 8x^2 - 90x = 0$. The answer below reflects this change.

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|-----|-------------------|-----|-----------------------------------|-----|----------------|-----|-----------------------|
| 3. | $x = -3, 7$ | 5. | $w = \frac{5}{4}, \frac{-9}{2}$ | 7. | $x = 0, -5$ | 9. | $p = 0, \frac{4}{3}$ |
| 11. | $x = 5, -5$ | 13. | $x = 0, 9$ | 15. | $x = 4, 5$ | 17. | $m = -9, 10$ |
| 19. | $x = \frac{3}{2}$ | 21. | $x = -3, \frac{5}{4}$ | 23. | $x = 5, -8$ | 25. | $x = -2, \frac{5}{3}$ |
| 27. | $x = -6, 5$ | 29. | $x = \frac{12}{5}, \frac{-12}{5}$ | 31. | $m = 2, 5$ | 33. | $y = -6, 3$ |
| 35. | $x = 2, -1$ | 37. | $m = 9, \frac{1}{2}$ | 39. | $x = 0, 9, -5$ | 41. | $p = 0, 5, 6$ |

Section 10.2

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|-----|------------------------------------|-----|--|-----|-----------------------|
| 3. | $x = -1, \frac{-5}{3}$ | 5. | $x = 3 + \sqrt{3}, 3 - \sqrt{3}$ | | |
| 7. | $D = -8$; no solutions | 9. | $D = -24$; no solutions | | |
| 11. | $D = 16$; two solutions | 13. | $D = -23$; no solutions | | |
| 15. | $x = -2, \frac{-5}{2}$ | 17. | $x = \frac{5 + \sqrt{15}}{2}, \frac{5 - \sqrt{15}}{2}$ | | |
| 19. | $x = -2, \frac{-2}{3}$ | 21. | $x = \frac{1 + \sqrt{2}}{2}, \frac{1 - \sqrt{2}}{2}$ | | |
| 23. | $y = 5$ | 25. | $x = \frac{3}{2}$ | 27. | $w = 3, \frac{-3}{4}$ |
| 29. | $y = \frac{1}{2}, \frac{3}{4}$ | 31. | $x = 3, \frac{3}{2}$ | 33. | $p = 2, \frac{-6}{5}$ |
| 35. | $x = 0, \frac{-1}{4}, \frac{1}{3}$ | | | | |

Section 10.3

- The width of the page is 6 inches and the length is 8 inches.
- The width of the patio is 9 yards and the length is 5 yards.
- Author Error:** In #7, the numbers are ridiculous! Truly sorry about that. Here is the correct answer, anyway:
- The shorter leg is 8 inches and the longer leg is 15 inches.
- The shorter leg is 5 inches, the longer leg is 12 inches, and the hypotenuse is 13 inches.
- After $2\frac{1}{2}$ seconds, the stone was 900 feet above the lake.

13. After 5 seconds, the stone was 600 feet above the lake.
15. After $2\frac{1}{2}$ seconds, the stone was 1,050 feet above the lake.
17. After 5 seconds, the stone was 700 feet above the lake.
19. The sandbag will hit the ground in 5 seconds.
21. The ball will hit the ground in 7 seconds.
23. The longer leg is 10 feet and the shorter leg is 6 feet.
25. **Error alert:** Unfortunately, #25 is the same as #9. Sorry about that. (By the way, #26 is the same as #10. This is an editing error.)
27. There can be 8 teams in the competition.

Section 10.4

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|-----|--|-----|--|-----|--|-----|--|
| 3. | $x \neq -3, 3$ | 5. | $x \neq \frac{5}{2}, \frac{-5}{2}$ | 7. | $x \neq 3, 10$ | 9. | $x \neq -10, 2$ |
| 11. | $x \neq -2, \frac{-4}{3}$ | 13. | $x = -1, 2$ (Restriction: $x \neq 0$) | 17. | $x = 2, 3$ (Restriction: $x \neq 0$) | 21. | $x = -3$ (Restriction: $x \neq 0, 1$) |
| 15. | $x = 2, -6$ (Restriction: $x \neq 0$) | 25. | No solution (Restriction: $x \neq 3$) | 29. | $x = \frac{3}{2}$ (Restriction: $x \neq 0, -1$) | | |
| 19. | $x = 3$ (Restriction: $x \neq 0, 1$) | | | | | | |
| 23. | $x = -1$ (Restriction: $x \neq -4$) | | | | | | |
| 27. | $x = 1, 5$ (Restriction: $x \neq 0, 3$) | | | | | | |
| 31. | No solution (Restriction: $x \neq 2, -1$) | | | | | | |

Section 10.5

1. It will take 24 hours to lower the lake level 15 feet.
3. It would take Raime's crew 4 hours to clean 2 floors by themselves.
5. It would take $7\frac{1}{2}$ minutes to fill the trough.
7. It would take Brett and Angela 60 minutes (1 hour) to groom the horses together.
9. It would take $7\frac{1}{2}$ hours for both pumps to fill the tank together.
11. Working alone, it would take Luis $1\frac{1}{2}$ hours to do the Miller's yard.
13. It takes Jenny 8 minutes to wash the car by herself and Carla 24 minutes to wash the car by herself.
15. Aaron's machine can run the whole job in 4 hours, Belinda's machine can run the whole job in 12 hours, and Carly's machine can run the whole job in 6 hours,