

5.3

Practice B

In Exercises 1–6, solve the system of linear equations by elimination. Check your solution.

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| 1. $2x + y = 10$
$5x - y = 11$ | 2. $-3x + 2y = 14$
$4x - 2y = -16$ | 3. $x + 2y = 7$
$13 - 5y = x$ |
| 4. $10x - 11 = -3y$
$5y - 5 = -10x$ | 5. $2y - 4 = 3x$
$2x - 6 = 2y$ | 6. $8x + 3y = -5$
$3y = x + 4$ |

In Exercises 7–12, solve the system of linear equations by elimination. Check your solution.

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| 7. $3x - 4y = 19$
$6x + 9y = 21$ | 8. $4x + 5y = 3$
$-3x + 2y = 38$ | 9. $8x + 2y = 22$
$5x - 3y = 35$ |
| 10. $4x + 7y = 1$
$6x - 3y = 15$ | 11. $21x - 11y = -9$
$-14x + 8y = 4$ | 12. $3x + 6y = 6$
$-2x - 9y = -24$ |
13. Describe and correct the error in solving for one of the variables in the linear system $4x + 5y = -10$ and $2x - 4y = 9$.

\times	Step 1	$4x + 5y = -10$ $2x - 4y = 9$
	Step 2	(Multiply by 2.) $4x + 5y = -10$ $4x - 8y = 18$
	Step 3	$-3y = 8$ $y = -\frac{8}{3}$

In Exercises 14–16, solve the system of linear equations using any method. Explain why you chose the method.

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| 14. $x - y = 3$
$x = \frac{1}{3}y + 5$ | 15. $x + 2y = \frac{5}{2}$
$3x - 5y = 2$ | 16. $4x - 5y = -3$
$14x + 2y = 9$ |
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17. You and your friend are making 30 liters of sodium water. You have liters of 10% sodium and your friend has liters of 22% sodium. How many of your liters and how many of your friend's liters should you mix to make 30 liters of 15% sodium?