independent practice

NAME

Module 3	Solving Linear Equations
	of One Variable
Lesson 4	Solving Two-Step Linear Equations

Solve and check.

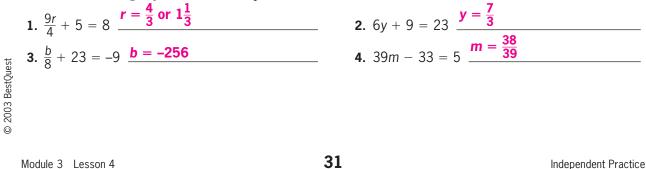
1. $17P + 8 = 110 \underline{P = 6}$	2. 4f + 4 = 224 <u>f = 55</u>
3. $3R + 5 = -139$ $R = -48$	4. $21w - 3 = 102 w = 5$
5. -32A - 8 = -136 <u>A</u> = 4	6. 11Q - 3 = 118 <u>Q</u> = 11
7. <i>T</i> ÷ 6 + 4 = 24 <u>T</u> = 120	8. $\frac{K}{4}$ + 7 = 27 <u>K</u> = 80
9. $\frac{V}{7}$ + 2 = -1 V = -21	10. $Y \div 4 - 4.5 = 7$ Y = 46
11. $\frac{x}{5} - 7 = 13$ x = 100	12. $\frac{W}{3} - 8 = 14$ W = 66
13. $5(H + 8) = 80$ H = 8	14. $-8(3 + m) = -64$ m = 5
15. $-6(d - 3) = -36$ <u>d</u> = 9	16. $14(T-4) = 112 T = 12$
17. $\frac{N-5}{3} = 2$ N = 11	18. $\frac{B-4}{4} = 5\frac{3}{4}$ B = 27
19. $\frac{X+7}{4} = 7$ X = 21	20. $\frac{P+18}{2} = 18.5$ P = 19

Journal C. S. S.F. S.F.

- **1.** Explain how you work backwards to solve a two-step equation.
- **2.** What would happen if you were to solve the equation 3x 5 = 19 by doing division first?
- **3.** Describe the steps you would use to solve the equation, $\frac{m}{2} 3 = 6$.
- **4.** What properties allow you to solve the equation $\frac{z}{2} 9 = 4$?
- **5.** Design a problem that could be solved in two steps.

Cumulative Review

Solve the following equations. Check your answers.



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True or false, x = 5 is a solution to the following equations.

5. $3x + 7 = 22$ True	6. $2x - 19 = 11$ False
7. $\frac{x}{10} + \frac{7}{2} = 4$ True	8. $9x - 23 = 1$ False
9. $-5x + 5 = -10$ False	10. $\frac{x}{2} + \frac{4}{3} = 3\frac{5}{6}$ True

Possible Journal Answers

- 1. The first step in solving two-step linear equations is to add or subtract in order to get the equation in the form (coefficient)(variable) = constant. Now you can multiply or divide through to isolate the variable.
- 2. By the rules of equality, you can do this. Divide 3x 5 = 19 by 3 on each side of the equation. $x - \frac{5}{3} = \frac{19}{3}$. By the Addition Property of Equality $x = \frac{19}{3} + \frac{5}{3} = 8$. 3. Add 3 to each side. $\frac{m}{2} = 9$. Multiply through by 2. m = 18.
- 4. By the Addition Property of Equality $\frac{z}{2} = 13$. By the Multiplication Property of Equality z = 26.
- 5. 36q + 56 = 5 could be solved in two steps. 36q = -51 and $q = \frac{-51}{36} = \frac{-17}{12} = -1\frac{5}{12}$.

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