

NAME _____

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



**independent
practice**

Solve and check.

- | | |
|---|---|
| 1. $r + 47 = 973$ $r = 926$ _____ | 2. $T + 68 = 732$ $T = 664$ _____ |
| 3. $M - 18 = 74$ $M = 92$ _____ | 4. $w - 35 = 78$ $w = 113$ _____ |
| 5. $-12 + p = -57$ $p = -45$ _____ | 6. $-17 + C = -92$ $C = -75$ _____ |
| 7. $-15v = -270$ $v = 18$ _____ | 8. $-32h = 288$ $h = -9$ _____ |
| 9. $\frac{f}{5} = -17$ $f = -85$ _____ | 10. $\frac{G}{-9} = 14$ $G = -126$ _____ |
| 11. $-5.3d = -14.31$ $d = 2.7$ _____ | 12. $6.01N = -1.202$ $N = -0.2$ _____ |
| 13. $G \div 17 = -884$ $G = -15,028$ _____ | 14. $a \div -19 = 399$ $a = -7,581$ _____ |
| 15. $m + \frac{2}{3} = \frac{2}{5}$ $m = -\frac{4}{15}$ _____ | 16. $W - \frac{4}{5} = \frac{3}{4}$ $W = \frac{31}{20}$ or $W = 1\frac{11}{20}$ _____ |
| 17. $\frac{1}{2}w = -12$ $w = -24$ _____ | 18. $-\frac{1}{4}q = \frac{7}{8}$ $q = -\frac{7}{2}$ or $q = -3\frac{1}{2}$ _____ |
| 19. $3.99y = 15$ $y = 3.76$ _____
(Round answer to hundredths) | 20. $\frac{e}{1.73} = -9.65$ $e = -16.7$ _____
(Round answer to tenths) |

Journal

1. Explain, in words, how you would solve the equation, $7m = 42$. Which property would you use?
2. How many solutions are there for the equation $\frac{r}{4} = 12$? How do you know?
3. How can you show that 3.2 is the solution of $y + 1.4 = 4.6$?
4. Explain how you can show that multiplication undoes division.
5. Explain how you can show that subtraction undoes addition.

Cumulative Review

Solve the following equations.

- | | |
|---|---------------------------------|
| 1. $m + 7 = 21$ $m = 14$ _____ | 2. $7n = 91$ $n = 13$ _____ |
| 3. $\frac{4d}{3} = \frac{8}{7}$ $d = \frac{6}{7}$ _____ | 4. $C - 18 = 32$ $C = 50$ _____ |
| 5. $\frac{8}{y} = 1$ $y = 8$ _____ | 6. $A + 25 = 56$ $A = 31$ _____ |

List the property of equality needed to find the value of the variable, do not solve.

7. $9W = 54$ Division Property of Equality 8. $u - 45 = 9$ Addition Property of Equality
9. $\frac{p}{32} = 5$ Multiplication Property of Equality 10. $\frac{5}{2}Q = 8$ Multiplication Property of Equality

Possible Journal Answers

1. To solve $7m = 42$ you need the Division Property of Equality. Dividing both sides by 7 will give $m = 6$.
2. There is one solution, $r = 48$. When solving for r you got $r = 48$, this tells you that the value of r is 48 and no other value.
3. The number 3.2 is the solution of $y + 1.4 = 4.6$ because when you check your answer you have $3.2 + 1.4 = 4.6$ which is a true statement. so $y = 3.2$ is the solution to the equation.
4. Multiplication undoes division in the following manner: given $x \div 3$, if you multiply by 3 you get x . Instead of 3, you could use any real number other than zero.
5. Subtraction undoes addition in the following manner: given $x + 3$, if you subtract by 3 you get x . Instead of 3, you could use any real number.