Additive and Multiplication Inverse Properties Solutions

Now that you have completed the practice problems, review the solutions below to see how well you did.

1. $x + 3$ Solution $3 + x$

2. $5 + y$ Solution $y + 5$

3. $10x$ Solution $x10$

4. $18z$ Solution $z18$

5. $r6$ Solution $6r$

6. ax Solution xa

7. xc Solution cx

8. $7(2 + b)$ Solution $(2 + b)7$

9. $6(s + 1)$ Solution $(s + 1)6$

10. $(8 + a)(x + 6)$ Solution $(x + 6)(8 + a)$

11. $(x + 16)(a + 7)$ Solution $(a + 7)(x + 16)$

12. $(x + y)(x - y)$ Solution $(x - y)(x + y)$

13. $0.06m$ Solution $m(0.06)$

14. $8s$ Solution $s8$

15. $5(6h + 1)$ Solution $(6h + 1)5$

16. $m(a + 2b)$ Solution $(a + 2b)m$

17. $k(10a - b)$ Solution $(10a - b)k$

18. $(21c)(0.008)$ Solution $(0.008)(21c)$

19. $(-16)(4)$ Solution $(4)(-16)$

20. $(5)(b - 6)$ Solution $(b - 6)(5)$

21. $\square \cdot \circ$ Solution $\circ \cdot \square$

22. $(100 - n)(55)$ Solution $(55)(100 - n)$

Simplify using the commutative property of multiplication for the following problems. You need not use the distributive property.

1. $9x2y$ Solution $18xy$

2. $5a6b$ Solution $30ab$

3. $2a3b4c$ Solution $24abc$

4. $5x10y5z$ Solution $250xyz$

5. $1u3r2z5m1n$ Solution $30mnruz$

6. $6d4e1f\,2(g + 2h)$ Solution $48def\,(g + 2h)$

7. $\left(\frac{1}{2}\right)d\left(\frac{1}{4}\right)e\left(\frac{1}{2}\right)a$ Solution $\frac{1}{16}ade$

For the following problems, use the distributive property to expand the quantities.

1. $2(y + 9)$ Solution $2y + 18$

2. $b(r + 5)$ Solution $br + 5b$

3. $m(u + a)$ Solution $mu + am$

4. $k(j + 1)$ Solution $jk + k$

5. $x(2y + 5)$ Solution $2xy + 5x$

6. $z(x + 9w)$ Solution $xz + 9wz$

7. $(1 + d)e$ Solution $e + de$

8. $(8 + 2f)g$ Solution $8g + 2fg$

9. $c(2a + 10b)$ Solution $2ac + 10bc$

10. $15x(2y + 3z)$ Solution $30xy + 45xz$

11. $8y(12a + b)$ Solution $96ay + 8by$

12. $z(x + y + m)$ Solution $xz + yz + mz$

13. $1(x + y)$ Solution $x + y$

14. $1(a + 16)$ Solution $a + 16$

15.   0.48(0.34a + 0.61)   Solution .16a + .29

16.   21.5(16.2a + 3.8b + 0.7c)   Solution 348.3a + 81.7b + 15.05c

17. $5x(2y + 3z)$ Solution $10xy + 15xz$

18. $2zt (Lm + 8k)$ Solution $2Lmzt + 16kzt$

Resource:

Ellis, W., & Burzynski, D. (2009, May 31). *Basic Properties of Real Numbers: Properties of the Real Numbers*. Retrieved from: http://cnx.org/content/m21894/1.4/. This work is licensed under the Creative Commons Attribution 3.0 Unported License. To view a copy of this license, visit http://creativecommons.org/licenses/by/3.0/.