MathZone

‹ **Study Tips** ›

- When you get a test back don't simply file it in your notebook. Rework all of the problems that you missed.
- Being a full-time student is a full-time job. A successful student spends 2 to 4 hours studying outside of class for every hour spent in the classroom.

Reading and Writing *After reading this section write out the answers to these questions. Use complete sentences.*

1. What are like terms?

2. What is the coefficient of a term?

3. What can you do to like terms that you cannot do to unlike terms?

4. What operations can you perform with unlike terms?

5. What is the difference between a positive sign preceding a set of parentheses and a negative sign preceding a set of parentheses?

6. What happens when a number is multiplied by -1?

‹ **1** › **Using the Properties in Computation**

Use the appropriate properties to evaluate the expressions. See Example 1.

7. $35(200)$

8. $15(300)$

9. $\frac{4}{3}(0.75)$

10. $5(0.2)$

11. $256 + 78 + 22$

12. $12 + 88 + 376$

13. $35 \cdot 3 + 35 \cdot 7$

14. $98 \cdot 478 + 2 \cdot 478$

15. $18 \cdot 4 \cdot 2 \cdot \frac{1}{4}$

16. $19 \cdot 3 \cdot 2 \cdot \frac{1}{3}$

17. $(120)(300)$

18. $150 \cdot 200$

19. $12 \cdot 375(-6 + 6)$

20. $354^2(-2 \cdot 4 + 8)$

21. $78 + 6 + 8 + 4 + 2$

22. $-47 + 12 - 6 - 12 + 6$

‹ **2** › **Combining Like Terms**

Combine like terms where possible. See Examples 2 and 3.

23. $5w + 6w$

24. $4a + 10a$

25. $4x - x$

26. $a - 6a$

27. $2x - (-3x)$

28. $2b - (-5b)$

29. $-3a - (-2a)$

30. $-10m - (-6m)$

31. $-a - a$

32. $a - a$

33. $10 - 6t$

34. $9 - 4w$

35. $3x^2 + 5x^2$

36. $3r^2 + 4r^2$

37. $-4x + 2x^2$

38. $6w^2 - w$

39. $5mw^2 - 12mw^2$

40. $4ab^2 - 19ab^2$

41. $\frac{1}{3}a + \frac{1}{2}a$

42. $\frac{3}{5}b - b$

‹ **3** › **Products and Quotients**

Simplify the following products or quotients. See Examples 4–6.

43. $3(4h)$

44. $2(5h)$

45. $6b(-3)$

46. $-3m(-1)$

47. $(-3m)(3m)$

48. $(2x)(-2x)$

49. $(-3d)(-4d)$

50. $(-5t)(-2t)$

51. $(-y)(-y)$

52. $y(-y)$

53. $-3a(5b)$

54. $-7w(3r)$

55. $-3a(2 + b)$

56. $-2x(3 + y)$

57. $-k(1 - k)$

58. $-t(t - 1)$

59. $\frac{3y}{3}$

60. $\frac{-9t}{9}$

61. $\frac{-15y}{5}$

62. $\frac{-12b}{2}$

63. $2\left(\frac{y}{2}\right)$

64. $6\left(\frac{m}{3}\right)$

65. $8y\left(\frac{y}{4}\right)$

66. $10\left(\frac{2a}{5}\right)$