Homework #4

Simplify:

1. $2g \times 2g^3$

2. $2x - x$

3. $2x^4 \times \frac{1}{2}x^2$

4. $7x^2 - 3x^2$

5. $2y \times 4y$

6. $2k^2 \times {}^-8$

7. $20x^3 \times 2x^3$

8. $2k^2 \times 3k^2$

9. $4y \times {}^-5y^2$

10. $2j^2 \times 4j^4$

11. $g \times 7$

12. $2k + 5k$

13. $4y - 3y$

14. ${}^-4k^3 + {}^-2k^3$

15. $4x^4 \times 2x^2$

16. ${}^-3x^4 \times {}^-7$

17. $5k - 7k$

18. ${}^-2x \times {}^-3x^2$

19. ${}^-3y \times 3y^2$

20. $4x^2 \div 2x$

21. $3k^2 + 5k^2$

22. $4x^3 \div 4x^3$

23. $2y^2 \times y$

24. $12y^4 \div 4y$

25. $7k \times 4k^2$

26. ${}^-6y^2 \times {}^-2y$

27. $12y^2 \div 3y$

28. $3k - 4k$

29. $2y^2 + 4y^2$

30. $4x \times {}^-2x^2$

31. $kg \times 5kg^4$

32. ${}^-2x \times {}^-4x^3$

33. $3x^2 - 2x^2$

34. $(x^2y)^2$

35. $(5x^2)^3$

36. $16x^4 \div 4x$

37. ${}^-5x^2 + 3x^2$

38. $4d - 8e + 5e$

39. $y + 4y \times 5y$

40. $\dfrac{4x^2y}{2xy^2}$

41. $4a + 8a - 5e$

42. $4xy + 2xy$

43. $8x \times {}^-2xy$

44. $\dfrac{20ab^3}{5ab^2}$

45. $y^3 + y^3$

46. $\dfrac{4xy}{2x}$

47. $x^4 - 3x^4$

48. $\dfrac{15b}{5a}$

49. $k^2 \times 3y^3$

50. $\dfrac{6x^2}{3x^4}$

51. ${}^-5x^2 + 3x^2$

52. $\dfrac{xy^3}{4xy^2}$

53. $(3y)^3$

54. $\dfrac{7x^5}{2x^2}$

55. $21k^4 \div 3$

56. $\dfrac{4y}{2xy}$

57. $4x^4 \div 4x^2$

58. $\dfrac{a^2}{2ay^2}$

59. $(x^2y)^1$

60. $x + x \times x + x$

61. $\dfrac{6xy}{4x^3}$

62. $(4y)^2$

63. $(5ab^2)^2$

64. $3a - a$

65. $8x^p - x^p$

66. $\sqrt{16x^2}$

67. $3x^p - 7x^p$

68. $12x^m \div 3x^m$

69. $3x^n + 3x$

70. $(2ab^2)^0$

71. $\sqrt{25x^6}$

72. $\left(\dfrac{5a}{b}\right)^2$

Answers Homework #4

Simplify:

1. $2g \times 2g^3 \quad = 4g^4$

2. $2x - x \quad = x$

3. $2x^4 \times \frac{1}{2} x^2 \quad = x^6$

4. $7x^2 - 3x^2 \quad = 4x^2$

5. $2y \times 4y \quad = 8y^2$

6. $2k^2 \times {}^-8 \quad = -16k^2$

7. $20x^3 \times 2x^3 \quad = 40x^6$

8. $2k^2 \times 3k^2 \quad = 6k^4$

9. $4y \times {}^-5y^2 \quad = {}^-20y^3$

10. $2j^2 \times 4j^4 \quad = 8j^6$

11. $g \times 7 \quad = 7g$

12. $2k + 5k \quad = 7k$

13. $4y - 3y \quad = y$

14. ${}^-4k^3 + {}^-2k^3 \quad = -6k^3$

15. $4x^4 \times 2x^2 \quad = 8x^6$

16. ${}^-3x^4 \times {}^-7 \quad = 21x^4$

17. $5k - 7k \quad = -2k$

18. ${}^-2x \times {}^-3x^2 \quad = 6x^3$

19. ${}^-3y \times 3y^2 \quad = -9y^3$

20. $4x^2 \div 2x \quad = 2x$

21. $3k^2 + 5k^2 \quad = 8k^2$

22. $4x^3 \div 4x^3 \quad = 1$

23. $2y^2 \times y \quad = 2y^3$

24. $12y^4 \div 4y \quad = 3y^3$

25. $7k \times 4k^2 \quad = 28k^3$

26. ${}^-6y^2 \times {}^-2y \quad = 12y^3$

27. $12y^2 \div 3y \quad = 4y$

28. $3k - 4k \quad = -k$ or ${}^-1k$

29. $2y^2 + 4y^2 \quad = 6y^2$

30. $4x \times {}^-2x^2 \quad = -8x^3$

31. $kg \times 5kg^4 \quad = 5k^2g^5$

32. ${}^-2x \times {}^-4x^3 \quad = 8x^4$

33. $3x^2 - 2x^2 \quad = x^2$ or $1x^2$

34. $(x^2y)^2 \quad = x^4y^2$

35. $(5x^2)^3 \quad = 125x^6$

36. $16x^4 \div 4x \quad = 4x^3$

37. ${}^-5x^2 + 3x^2 \quad = {}^-2x^2$

38. $4d - 8e + 5e = 4d - 3e$

39. $y + 4y \times 5y \quad = 20y^2 + y$

40. $\frac{4x^2y}{2xy^2} = \frac{2x}{y}$ (or $2xy^{-1}$)

41. $4a + 8a - 5e \quad = 12a - 5e$

42. $4xy + 2xy \quad = 6xy$

43. $8x \times {}^-2xy \quad = -16x^2y$

44. $\frac{20ab^3}{5ab^2} \quad = 4b$

45. $y^3 + y^3 \quad = 2y^3$

46. $\frac{4xy}{2x} \quad = 2y$

47. $x^4 - 3x^4 \quad = -2x^4$

48. $\frac{15b}{5a} = \frac{3b}{a}$ (or $3a^{-1}b$)

49. $k^2 \times 3y^3 \quad = 3k^2y^3$

50. $\frac{6x^2}{3x^4} = \frac{2}{x^2}$ (or $2x^{-2}$)

51. ${}^-5x^2 + 3x^2 \quad = {}^-2x^2$

52. $\frac{xy^3}{4xy^2} = \frac{y}{4}$ (or $\frac{1}{4} y$)

53. $(3y)^3 \quad = 27y^3$

54. $\frac{7x^5}{2x^2} \quad = 3.5x^3$

55. $21k^4 \div 3 \quad = 7k^4$

56. $\frac{4y}{2xy} = \frac{2}{x}$ (or $2x^{-1}$)

57. $4x^4 \div 4x^2 \quad = x^2$

58. $\frac{a^2}{2ay^2} = \frac{a}{2y^2}$ (or $\frac{1}{2}ay^{-2}$)

59. $(x^2y)^1 \quad = x^2y$

60. $x + x \times x + x = x^2 + 2x$

61. $\frac{6xy}{4x^3} = \frac{3y}{2x^2}$ (or $1.5x^{-2}y$)

62. $(4y)^2 \quad = 16y^2$

63. $(5ab^2)^2 \quad = 25a^2b^4$

64. $3a - a \quad = 2a$

65. $8x^p - x^p \quad = 7x^p$

66. $\sqrt{16x^2} \quad = 4x$

67. $3x^p - 7x^p \quad = -4x^p$

68. $12x^m \div 3x^m \quad = 4$

69. $3x^n + 3x \quad = $ same

70. $(2ab^2)^0 \quad = 1$

71. $\sqrt{25x^6} \quad = 5x^3$

72. $\left(\frac{5a}{b}\right)^2 \quad = \frac{25a^2}{b^2}$