Homework #3

Simplify:

1. $2g \times 2g^3$
2. $k^4 \times 3k$
3. $4y + 3y$
4. $y \times 2x^2$
5. $2k \times 8$
6. $x \times 4x^2$
7. $4x \times 2x^3$
8. $3k \times {}^{-}4k$
9. $k^3 + 3k^3$
10. $y^2 \times 5$
11. $2j^2 + j^2 \times 4$
12. $2k \times 3 + 5k$
13. $30k^4 \div 3 + 5$
14. $4y - 3y \times 2$
15. $2k \times 4$
16. $4y^4 - 3y$
17. $2y \times 2y$
18. $y^3 \times 2y^3$
19. $3y + 3x + y$
20. $3k^2 \times 3x^2$
21. $\frac{25b}{5ab^2}$
22. $2f \times {}^{-}3$
23. $4k^3 + {}^{-}2k^3$
24. $\frac{5x^2y}{2x^2}$
25. $12k - 12k$
26. $3x^3 \times x^{-1}$
27. $\frac{4ef}{8f}$
28. $3x - x^2 + 4x$
29. $12x \div {}^{-}3x$
30. $8x^2 - 12x^2$
31. $2x - x$
32. $x^4 \times ½$
33. $7x^2 - 3x^2$
34. $(xy)^2$
35. $\frac{4xy}{2x}$
36. $(3y)^2$
37. $\frac{4x^2y}{2xy^2}$
38. $7 \times g - g$
39. $\frac{20ab^3}{5ab^2}$
40. $3x^3 \div 3$
41. $x + 2x \times y$
42. $3x + 4x^2 \div 2$
43. $\frac{5x^5}{2x^3}$
44. $k - 2k$
45. $\frac{9x^2}{3x^4}$
46. $1 \times y$
47. $\frac{12xy^3}{4x^2y}$
48. $2 \times 2x$
49. $(5x^2)^3$
50. $\frac{3x^2}{12x^3}$
51. $(xy)^{-2}$
52. $3x^2 - 7x^2$
53. $\frac{8xy^4}{4y^2}$
54. $(2ab^2)^3$
55. $\frac{4y}{2xy}$
56. $({}^{-}6x)^2$
57. $(2ab^5)^2$
58. $({}^{-}5x^2)^3$
59. $x + 2 - x + 1$
60. $(4x + 2) \div 2$
61. $2g \times 2g^m$
62. $4y^m + 3y^m$
63. $k^p \times 3k$
64. $2y \times x^n$
65. $16k^m \div 8$
66. $2x^n + 2x^n$
67. $x^2 \times 4x^n$
68. $10x^m - 7x^m$
69. $(x^2y)^n$
70. $(5ab^m)^2$
71. $8x^m \div 4x^n$
72. $\left(\frac{e}{2f}\right)^2$

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Answers Homework #3

Simplify:

1. $2g \times 2g^3 = 4g^4$
2. $k^4 \times 3k = 3k^5$
3. $4y + 3y = 7y$
4. $y \times 2x^2 = 2x^2y$
5. $2k \times 8 = 16k$
6. $x \times 4x^2 = 4x^3$
7. $4x \times 2x^3 = 8x^4$
8. $3k \times {}^-4k = -12k^2$
9. $k^3 + 3k^3 = 4k^3$
10. $y^2 \times 5 = 5y^2$
11. $2j^2 + j^2 \times 4 = 6j^2$
12. $2k \times 3 + 5k = 11k$
13. $30k^4 \div 3 + 5 = 10k^4 + 5$
14. $4y - 3y \times 2 = -2y$
15. $2k \times 4 = 8k$
16. $4y^4 - 3y =$ *same*
17. $2y \times 2y = 4y^2$
18. $y^3 \times 2y^3 = 2y^6$
19. $3y + 3x + y = 4y + 3x$
20. $3k^2 \times 3x^2 = 9k^2x^2$
21. $\frac{25b}{5ab^2} = \frac{5}{ab}$ (or $5a^{-1}b^{-1}$)
22. $2f \times {}^-3 = -6f$
23. $4k^3 + {}^-2k^3 = 2k^3$
24. $\frac{5x^2y}{2x^2} = \frac{5y}{2}$ (or $2.5y$)
25. $12k - 12k = 0$
26. $3x^3 \times x^{-1} = 3x^2$
27. $\frac{4ef}{8f} = \frac{e}{2}$ (or 0.5e)
28. $3x - x^2 + 4x = -x^2 + 7x$
29. $12x \div {}^-3x = -4$
30. $8x^2 - 12x^2 = -4x^2$
31. $2x - x = x$
32. $x^4 \times ½ = ½\ x^4$
33. $7x^2 - 3x^2 = 4x^2$
34. $(xy)^2 = x^2y^2$
35. $\frac{4xy}{2x} = 2y$
36. $(3y)^2 = 9y^2$
37. $\frac{4x^2y}{2xy^2} = \frac{2x}{y}$ (or $2xy^{-1}$)
38. $7 \times g - g = 6g$
39. $\frac{20ab^3}{5ab^2} = 4b$
40. $3x^3 \div 3 = x^3$
41. $x + 2x \times y = x + 2xy$
42. $3x + 4x^2 \div 2 = 3x + 2x^2$
43. $\frac{5x^5}{2x^3} = \frac{5x^2}{2}$ (or $2.5x^2$)
44. $k - 2k = -k$
45. $\frac{9x^2}{3x^4} = \frac{3}{x^2}$ (or $3x^{-2}$)
46. $1 \times y = y$
47. $\frac{12xy^3}{4x^2y} = \frac{3y^2}{x}$ (or $3y^2x^{-1}$)
48. $2 \times 2x = 4x$
49. $(5x^2)^3 = 125x^6$
50. $\frac{3x^2}{12x^3} = \frac{1}{4x}$ (or $0.25x^{-1}$)
51. $(xy)^{-2} = x^{-2}y^{-2}$
52. $3x^2 - 7x^2 = -4x^2$
53. $\frac{8xy^4}{4y^2} = 2xy^2$
54. $(2ab^2)^3 = 8a^3b^6$
55. $\frac{4y}{2xy} = \frac{2}{x}$ (or $2x^{-1}$)
56. $({}^-6x)^2 = 36x^2$
57. $(2ab^5)^2 = 4a^2b^{10}$
58. $({}^-5x^2)^3 = -125x^6$
59. $x + 2 - x + 1 = 3$
60. $(4x + 2) \div 2 = 2x + 1$
61. $2g \times 2g^m = 4g^{m+1}$
62. $4y^m + 3y^m = 7y^m$
63. $k^p \times 3k = 3k^{p+1}$
64. $2y \times x^n = 2x^ny$
65. $16k^m \div 8 = 2k^m$
66. $2x^n + 2x^n = 4x^n$
67. $x^2 \times 4x^n = 4x^{n+2}$
68. $10x^m - 7x^m = 3x^p$
69. $(x^2y)^n = x^{2n}y^n$
70. $(5ab^m)^2 = 25a^2b^{2m}$
71. $8x^m \div 4x^n = 2x^{m-n}$
72. $\left(\frac{e}{2f}\right)^2 = \frac{e^2}{4f^2}$

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