

Extra Practice Homework: Chapters 1 & 2

Simplify. Leave each answer in exponential form with positive exponents.

1. $x^6(x^9)$

5. $(x^4)^3$

9. $(y^7)^5$

2. k^{-3}

6. b^{-8}

10. $\frac{x^9}{x^3}$

3. $w^{-3}(w^7)$

7. $a^9(b^{12})$

11. z^{-4}

4. $\frac{y^{11}}{y^4}$

8. $\frac{h^8}{h^{-2}}$

12. $(r^2)^8$

Evaluate each expression for $x = 4$, $y = -5$, $z = \frac{1}{4}$.

Answers should be integers or fractions. No decimals or mixed numbers.

13. $3y^2$

17. $z \cdot x^2$

21. z^2

14. $2x + y$

18. $y + z$

22.

15. $(3x)z$

19. $z - y$

23. $\frac{2x}{y}$

16. $|y + x|$

20. $y^2 + y + 1$

24. $\left(\frac{y}{x}\right)^2$

Simplify the expression.

25. $4a + 7b - a + 5b$

27. $3(x + 3) - 2x + 1$

26. $5x - (2x - 4)$

28. $7a - (4a + 5) - (6 - 2a)$

Solve the equation. Write the problem Show the steps, line by line. Box your final answer.

29. $\frac{x}{3} - 7 = 12$

33. $4y - 2 + 3y = 5 + y - 2$

30. $3x + 1.9 = 4.6$

34. $3 - (x + 4) = 11$

31. $3(x - 5) + 1 = 34$

35. $3 - 2(3m - 1) = 41$

32. $3x + 4 = 7 - 2x$