

Name _____ Period _____

ALGEBRA Review Chapter 8 & 9

Multiply.

1. $x^{-2} \cdot x^6$ 1. _____

2. $x^{-2} \cdot x^2$ 2. _____

3. $(x^3y^{-6})^2$ 3. _____

4. $(a^2b)^6 \cdot (a^4b)^3$ 4. _____

5. $(\frac{5x^3}{y})^3$ 5. _____

Simplify. Write with positive exponents.

6. $(\frac{4}{3})^{-2}$ 6. _____

7. 2^{-6} 7. _____

8. $(\frac{1}{3})^{-2})^{-4}$ 8. _____

9. $(\frac{1}{5})^{-3}$ 9. _____

10. 6^{-1} 10. _____

11. $(3x)^{-2}$

11. _____

12. $\frac{1}{2x^{-7}}$

12. _____

13. $\frac{2x^{-3}}{y^{-4}}$

13. _____

14. $x^3y^{-2}z^3$

14. _____

15. $\frac{x^3y^{-2}}{3z^{-2}}$

15. _____

16. $\frac{x^{15}}{x^{17}}$

16. _____

17. $\frac{x^2}{x^{-2}}$

17. _____

18. $\frac{3x^3y^2}{7x} \cdot \frac{14x^3y^3}{y^5}$

18. _____

19. $\left(\frac{2^4}{x^2y^3z^2}\right)^{-2}$

19. _____

20. $7^0 \cdot \frac{1}{3^{-2}}$

20. _____

Evaluate the expression.

21. $\sqrt{49}$

21. _____

22. $\sqrt{-4}$

22. _____

23. $\sqrt{.16}$

23. _____

24. $\sqrt{0}$

24. _____

25. $\sqrt{100}$

25. _____

Evaluate $\sqrt{b^2 - 4ac}$ for the given values of a , b , and c .

26. $a = 4, b = 5, c = 1$

26. _____

27. $a = 2, b = 4, c = 0.5$

27. _____

28. $a = -2, b = 8, c = -8$

28. _____

29. $a = -3, b = 7, c = 5$

29. _____

Solve the equation.

30. $x^2 = 36$

30. _____

31. $5y^2 = 500$

31. _____

32. $5a^2 + 5 = 20$

32. _____

33. $6x^2 = 0$

33. _____

Simplify the expression.

34. $\sqrt{44}$ 34. _____

35. $\sqrt{27}$ 35. _____

36. $\sqrt{48}$ 36. _____

37. $\sqrt{125}$ 37. _____

38. $\sqrt{2} \cdot \sqrt{6}$ 38. _____

39. $\sqrt{4} \cdot \sqrt{16}$ 39. _____

40. $\sqrt{5} \cdot \sqrt{5}$ 40. _____

41. $\sqrt{\frac{7}{9}}$ 41. _____

42. $8\sqrt{\frac{13}{9}}$ 42. _____

43. $\frac{\sqrt{80}}{\sqrt{49}}$ 43. _____

44. $\sqrt{2} \cdot \sqrt{2} \cdot \sqrt{2} \cdot \sqrt{2} \cdot \sqrt{3} \cdot \sqrt{3}$ 44. _____

45. $3\sqrt{48}$ 45. _____