

Name _____ Period _____

Score:

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Unit 4 Review

1) What is a rational number?

Write each fraction or mixed number as a decimal.

2) $\frac{7}{12}$

3) $-\frac{3}{80}$

4) $7\frac{1}{15}$

Write each decimal as a fraction.

5) .843

6) -8.16

7) $0.\overline{32}$

8) $-\overline{.069}$

9) When Juliana went strawberry picking and picked 54 strawberries. She ate 28 of them. Write a fraction and a decimal that represent the number of strawberries she ate. Round the decimal to the nearest thousandth place.

Evaluate each expression.

10. 3^5

11. -10^4

12. -2^5

13. $\left(\frac{1}{3}\right)^3$

Simplify.

14. $x \cdot x^2 \cdot x^3$

15. $2x^2 \cdot 3x$

16. $(4uv)(-u)(2u^4v)$

17. $(-3a^2c)(-3b^2c)$

18. $\frac{8a^8b^3}{24ab^2}$

19. $\frac{3^4a^8b^3}{3a^5b}$

20. $\frac{4^6 \cdot (-5)^8 \cdot 8^3}{4 \cdot (-5)^5 \cdot 8^7}$

21. $\frac{21m^8n^7}{14m^5n^7}$

Simplify.

22. $(x^4)^3$ 23. $(-7n^3)^2$ 24. $(-6x^3y^4)^5$ 25. $(-3md^9)^4$ 26. $x^8y^3(10x^5y^4)^2$

27. $(xy^4)^4(-9y^3)$ 28. $(8ut^3)^2(u^2t)^2$ 29. $(\frac{1}{2}k^8v^3)^2(60kv^4)$ 30. $(\frac{2}{5}d)^3$

Write your answers in exponential form.

31. $(8^7)^6$ 32. $[(2^3)^2]^3$ 33. $(5ab^2)^6(8a^2b^4)^3$ 34. $[(3a^3b^4)^2]^5$

35. $2(a^3)^3(6a^2)^4$ 36. $(-ab)(-b^2c^2)(-a^2b^2)$

37. $\frac{a^{-11}}{a^{-8}}$ 38. $\frac{x^{-2}y^7}{x^9y^{-13}}$ 39. $\frac{25a^{11}b^{-7}}{15a^{-5}b^8}$ 40. $11^{-9} \cdot 11^{-5}$ 41. $7^6 \cdot 7^{-2}$

42. $\frac{7^{-13}}{7^6}$ 43. $\frac{14a^{-6}b^5}{26a^4b^2}$ 44. $\frac{-36x^{-3}y^8z^2}{45xy^{-6}z^8}$ 45. $(\frac{x^2y^4}{x^4})^3$ 46. $\frac{16x^0y^2}{2x^3y^3}$