

Name: _____

Period: _____ Date: _____

Power of a Product or Quotient and Power to a Power

Section I. Write in extended format

1. $(7x)^5$

2. $\left(\frac{g}{h}\right)^4$

3. $\left(\frac{5a}{8b}\right)^3$

4. $(16cd)^2$

5. $(-6x^4)^6$

6. $(2a^3b^2)^3$

Section II. Simplify. Write all answers with positive exponents

7. $(3k)^4$

8. $\left(\frac{g}{h}\right)^2$

9. $(2f)^5$

10. $\left(\frac{5a}{b}\right)^3$

11. $(x^3)^5$

12. $(xy^4)^7$

13. $((-6)^3)^8$

14. $((\pi)^2)^5$

15. $(9x^7)^{10}$

16. $\left(\left(\frac{2}{3}\right)^4\right)^3$

17. $\left(\frac{3j^2}{k^9}\right)^8$

18. $\left(\frac{12m^6n}{5q^9}\right)^3$

19. $\left(\frac{1}{7}h^9\right)^4$

20. $(14m^6)^6$

21. $\frac{(x^3)^5}{y^{13}}$

22. $\frac{a^6}{(b^3)^6}$

23. $(h^{-7})^{-6}$

24. $(j^{-3})^5$

25. $(a^{-11})^{-9}$

26. $(b^6)^{-3}$

27. $(a^3b^{-4})^2$

28. $(k^{-8}p^5)^{-3}$

29. $(3v^9w^{-2})^4$

30. $(5m^{-4}n^7)^{-3}$

31. $(g^5h^3)^{-5}$

32. $(4d^{-2}f^9)^3$