Evaluate each expression.

4. 7^{-3}

6. $(-2)^{-6}$

8. $(-4)^0$

10. $\left(\dfrac{-9}{16}\right)^0$

12. $\left(\dfrac{4}{3}\right)^{-3}$

14. 0^{-2}

16. $7^{-6} \cdot 7^4$

18. $(3^{-2})^2$

20. $\dfrac{1}{6^{-2}}$

22. $\dfrac{6^{-3}}{6^{-5}}$

24. $16\left(\dfrac{2^{-3}}{2^2}\right)$

26. $3^{-2} \cdot \left(\dfrac{5}{7^0}\right)$

Simplify each expression. Write your answer using only positive exponents.

28. x^{-4}

30. $(4g)^{-3}$

32. $x^2 y^{-3}$

34. $(6x^{-2}y^3)^{-3}$

36. $\dfrac{r^{-2}}{s^{-4}}$

38. $\dfrac{1}{8x^{-2}y^{-6}}$

40. $\dfrac{1}{(-2z)^{-2}}$

42. $\dfrac{(3x)^{-3}y^4}{-x^2y^{-6}}$

50. MASS The mass of a grain of salt is about 10^{-4} gram. About how many grains of salt are in a box containing 100 grams of salt?

51. MASS The mass of a grain of a certain type of rice is about 10^{-2} gram. About how many grains of rice are in a box containing 10^3 grams of rice?