

Chapter Test B

For use after Chapter 8

Simplify the expression. The simplified expression should have no negative exponents.

18. $\left(\frac{4x^2y}{3xy^2}\right)^4$

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

Rewrite the number in decimal form.

20. 4.3269×10^3

21. 7.1532×10^{-5}

Rewrite the number in scientific notation.

22. 0.0032

23. 321,562.5

Evaluate the expression without using a calculator. Write the result in decimal form.

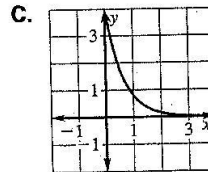
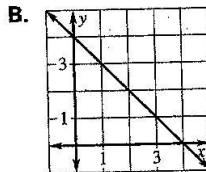
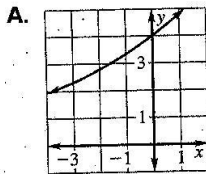
24. $(6 \times 10^{-2}) \cdot (7 \times 10^{-3})$

25. $\frac{5 \times 10^{-3}}{2 \times 10^{-4}}$

26. You deposit \$2000 in an account that pays 8% interest compounded yearly. Find the balance of the account after 3 years.

27. A city had a declining population from 1992 to 1998. The population in 1992 was 200,000. Each year for 6 years, the population declined by 3%. Write an exponential decay model to represent this situation.

Match the equation with its graph.



28. $y = 4 - x$

29. $y = 4(1.2)^x$

30. $y = 4(0.2)^x$

Classify the model as exponential growth or exponential decay.

31. $y = 11(4.25)^x$

32. $y = 46(0.78)^x$

18. _____

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