

Name _____

Review: Sections 6-1 & 6-2

1. A population of 210 animals decreases at an annual rate of 15%. Find the multiplier for the rate of exponential decay.
[A] 1.15 [B] 1.85 [C] 0.85 [D] 0.15

2. A town with a current population of 935,750, has a growth rate of 2.2%. Find the multiplier for the rate of exponential growth.

3. The inflation rate of the U.S. dollar is 3.5 percent. What this means is that every year, prices increase by 3.5 percent. If a stuffed animal cost \$1.12 four years ago, what does it cost now?
[A] \$1.29 [B] \$4.32 [C] \$0.97 [D] \$1.16

4. Evaluate $5(4)^x$ for $x = 2.1$.

5. Which function represents exponential growth?
[A] $y(x) = 4x^2 + 2x - 2$ [B] $y(x) = 4(1.6)^x$ [C] $y(x) = 4(0.2)^x$ [D] none of these

6. Determine whether the function $y(x) = 5(0.33)^x$ represents exponential growth or exponential decay.
7. Tell whether the function $y(x) = 4\left(\frac{8}{3}\right)^x$ represents exponential growth or decay.
8. If a principal of \$1010 is invested at an annual interest rate of 4% compounded annually, what is the account balance at the end of 4 years?
[A] \$1182 [B] \$1136 [C] \$4202 [D] \$1172
9. Find the final amount of the investment.
\$2400 at 8% interest compounded quarterly for 4 years.
[A] \$2592.00 [B] \$3265.17 [C] \$3168.00 [D] \$3294.69
10. If a principal of \$1520 is invested at an annual interest rate of 9% compounded annually, what is the account balance at the end of 6 years?