

Unit 6: Introduction to Exponential Functions

CONCEPT

Name: _____ Date: _____

Evaluate each exponential expression or function. Show your work and write your final answer.

1. Evaluate 2^4 .

Answer: _____

2. Evaluate 10×3^0 .

Answer: _____

3. For the function $f(x) = 4 \times 2^x$, find $f(3)$.

Answer: _____

4. For the function $f(x) = 5 \times 3^x$, find $f(2)$.

Answer: _____

5. A colony starts with 6 bacteria and doubles every hour, modeled by $f(x) = 6 \times 2^x$. How many bacteria are there after 2 hours?

Answer: _____

6. For the decay function $f(x) = 64 \times (1/2)^x$, find $f(4)$.

Answer: _____

7. For the decay function $f(x) = 48 \times (1/2)^x$, find $f(3)$.

Answer: _____

8. For the function $f(x) = 7 \times 5^x$, what is the initial value (the value when $x = 0$)?

Answer: _____

9. For the function $f(x) = 3 \times 4^x$, what is the growth factor (the base)?

Answer: _____

10. Evaluate $(1/2)^3$.

Answer: _____

11. For the function $f(x) = 2 \times 5^x$, find $f(2)$.

Answer: _____

12. For the function $f(x) = 81 \times (1/3)^x$, find $f(2)$.

Answer: _____