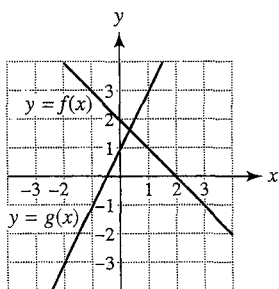
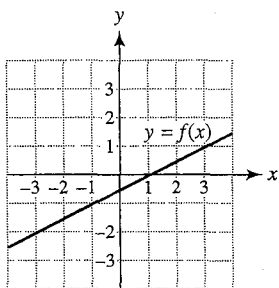


Graded Homework 12

- If $f(x) = 4x^3 - 5x$ and $g(x) = x + 7$, then evaluate $(g \circ f)(1)$ and $(f \circ g)(x)$.
- Use the graph to evaluate each expression.
 - $(f \circ g)(-1)$
 - $(g \circ f)(1)$



- Explain why $f(x) = x^2 - 25$ is not a one-to-one function.
- If $f(x) = 5 - 2x$, find $f^{-1}(x)$.
- Use the graph of $y = f(x)$ to sketch a graph of $y = f^{-1}(x)$. Include the graph of f and the line $y = x$ in your graph.



- Use the table to write a table of values for $f^{-1}(x)$. What are the domain and range of f^{-1} ?

x	1	2	3	4
$f(x)$	8	6	4	2

- Evaluate $f(x) = 3\left(\frac{1}{4}\right)^x$ at $x = 2$.
- Graph $f(x) = 1.5^{-x}$. State whether the graph illustrates exponential growth, exponential decay, or logarithmic growth.

Exercises 9 and 10: A table for a function f is given.

- Determine whether f represents linear or exponential growth.
- Find a formula for $f(x)$.

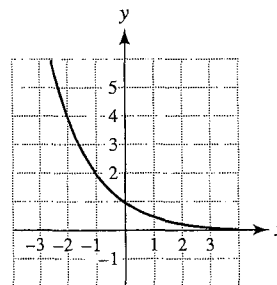
9.

x	-2	-1	0	1	2
$f(x)$	0.75	1.5	3	6	12

10.

x	-2	-1	0	1	2
$f(x)$	-4	-2.5	-1	0.5	2

- Use the graph of $y = Ca^x$ to find C and a .



- If \$750 are deposited in an account paying 7% annual interest at the end of each year, approximate the amount in the account after 5 years.
- Let $f(x) = 1.5 \ln(x - 5)$. Approximate $f(21)$ to the nearest hundredth.
- Evaluate $\log \sqrt{10}$ by hand.
- Approximate $\log_2 43$ to the nearest thousandth.
- Graph $f(x) = \log(x - 2)$. Compare this graph to the graph of $y = \log x$.
- Write $\log \frac{x^3 y^2}{\sqrt{z}}$, using sums and differences of logarithms of x , y , and z .
- Write $4 \ln x - 5 \ln y + \ln z$ as one logarithm.
- Rewrite $\log 7^{2x}$, using the power rule.
- Simplify $\ln e^{1-3x}$, using inverse properties of logarithms.