# Inverse Functions

**State if the given functions are inverses.**

1) $g(x) = 4 - \dfrac{3}{2}x$

  $f(x) = \dfrac{1}{2}x + \dfrac{3}{2}$

2) $g(n) = \dfrac{-12 - 2n}{3}$

  $f(n) = \dfrac{-5 + 6n}{5}$

3) $f(n) = \dfrac{-16 + n}{4}$

  $g(n) = 4n + 16$

4) $f(x) = -\dfrac{4}{7}x - \dfrac{16}{7}$

  $g(x) = \dfrac{3}{2}x - \dfrac{3}{2}$

7) $f(x) = \dfrac{4}{-x - 2} + 2$

  $h(x) = -\dfrac{1}{x + 3}$

8) $g(x) = -\dfrac{2}{x} - 1$

  $f(x) = -\dfrac{2}{x + 1}$

**Find the inverse function of each function or explain why the inverse function does not exist.**

a) $f(x) = -1 - \dfrac{1}{5}x$

b) $h(x) = \dfrac{-x - 5}{3}$

c) $g(x) = -2x^2 + 1$

d) $k(x) = \dfrac{4}{x - 1}$

# Graphing Exponentials

**9.** $f(x) = 2^{x-2} - 1$

Domain:              Range:

Parent function and transformations:
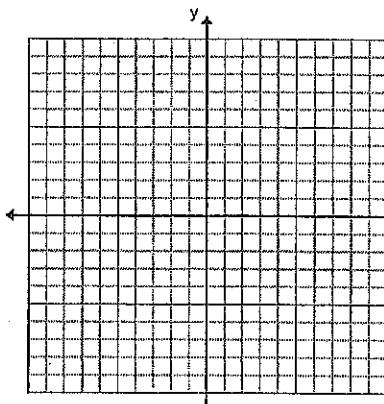
Asymptote:

End Behavior:

**10.** $f(x) = \left(\frac{1}{3}\right)^x - 4$

Domain:              Range:

Parent function and transformations:
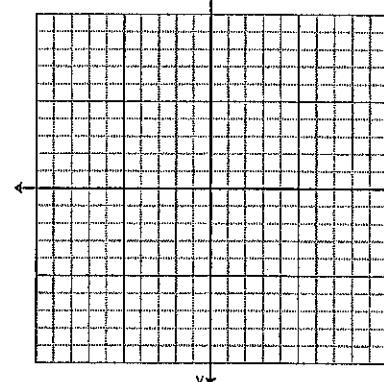
Asymptote:

End Behavior:

**11.** $f(x) = -(3^{x+1}) + 2$

Domain:              Range:

Parent function and transformations:
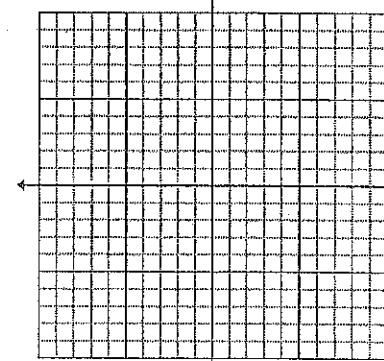
Asymptote:

End Behavior:

**12.** $f(x) = \left(\frac{1}{2}\right)^{x+2} - 3$

Domain:              Range:

Parent function and transformations:
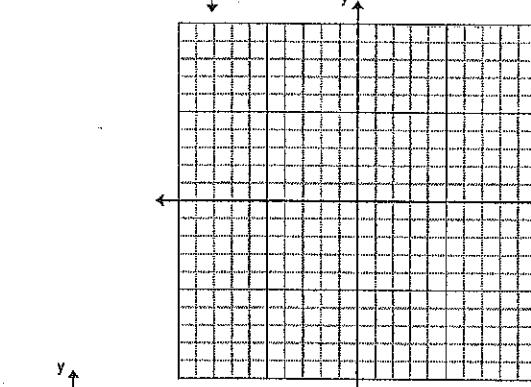
A:

EB:

**13.** $f(x) = 3\left(\frac{1}{2}\right)^{x-2} + 1$

Domain:              Range:

Parent function and transformations:

Asymptote:

End Behavior: