# Mastery Check
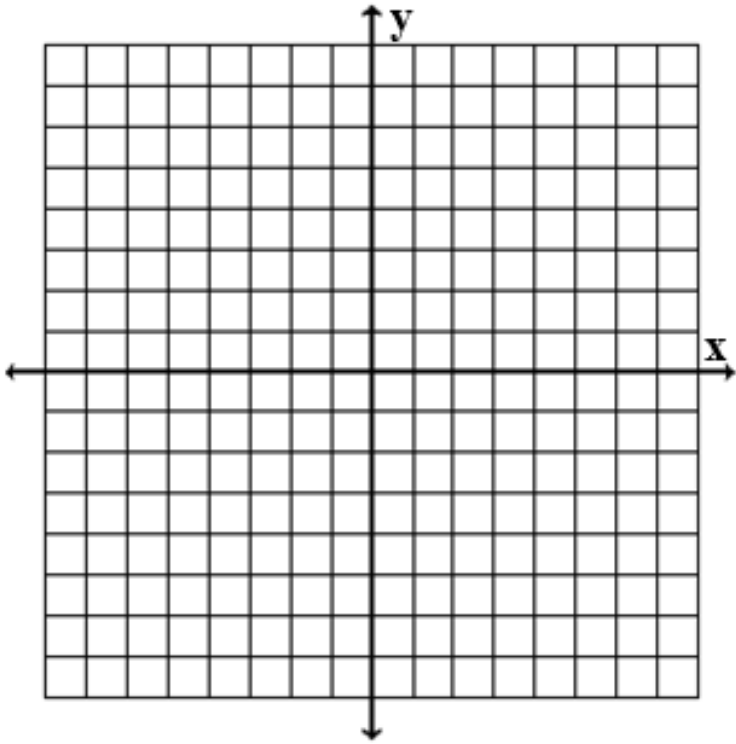
**1)** Graph the function $f(x) = 3^x$ and its transformation $g(x) = 3^{x+1} - 2$.



**2)** Solve.

$$\left(\frac{1}{2}\right)^x = 8$$

**3)** A total of $12,000 is invested at an annual rate of 9%. Find the balance after 5 years if the compounding is monthly.