## Finding and Proving Inverses

Find the inverse of the following functions.

1) $f(x)=15 x-1$
2) $g(x)=\frac{1}{3} x+7$
3) $k(x)=(2 x-3)^{2}-1$
4) $f(x)=\frac{x+5}{-5}$
5) $h(x)=\sqrt{x-5}$
6) $p(x)=2 x^{3}+3$

Use composition to determine if the following functions are inverses.
7) $\mathrm{f}(\mathrm{x})=\sqrt[3]{x}-3$ and $\mathrm{g}(\mathrm{x})=(\mathrm{x}+3)^{3}$
8) $f(x)=\frac{-16+x}{4}$ and $g(x)=4 x+16$

