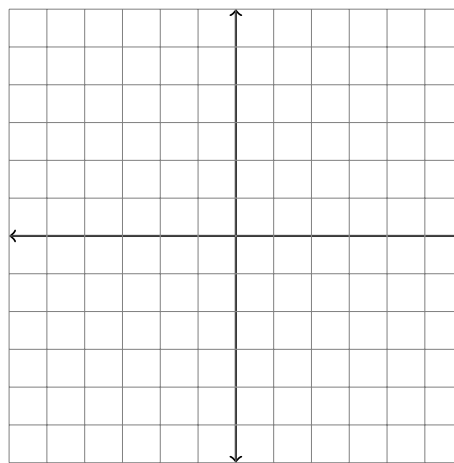
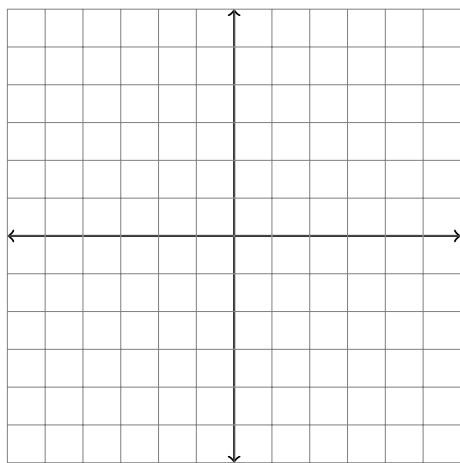
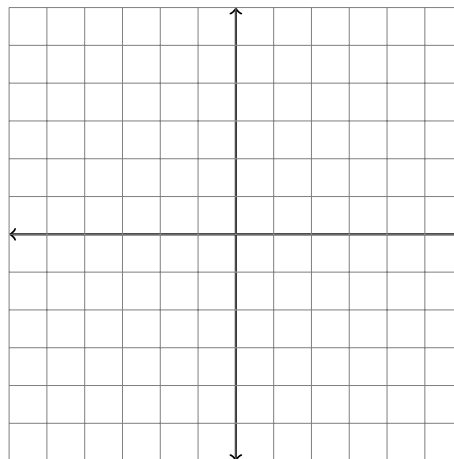
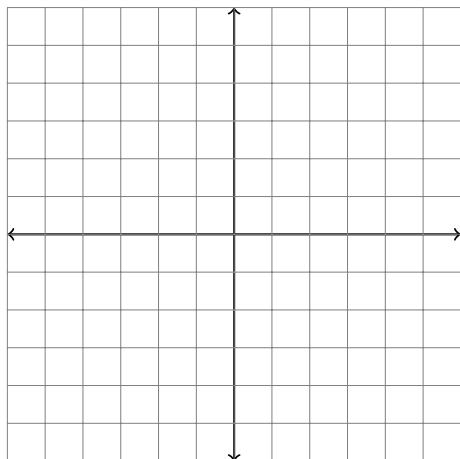


For each kind of the following problems, compute  $f(g(x))$  and  $f(g(x))$  and plot both.

(a)  $f(x) = x^2 + 1$ ,  $g(x) = x^2 + x + 3$

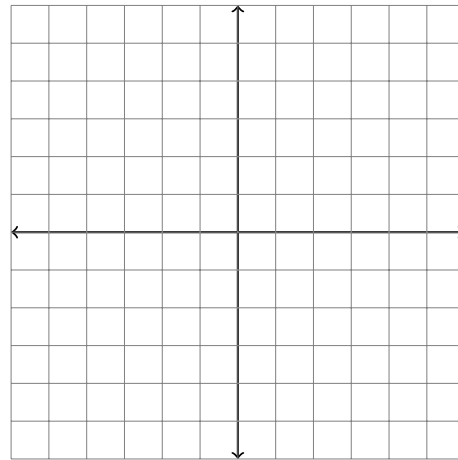
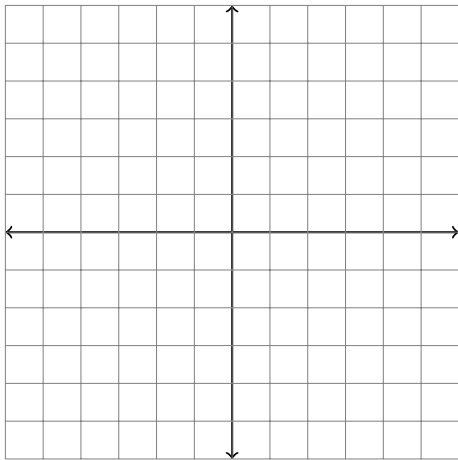


(b)  $f(x) = \sqrt{x}$ ,  $g(x) = x^2 + 2x + 1$

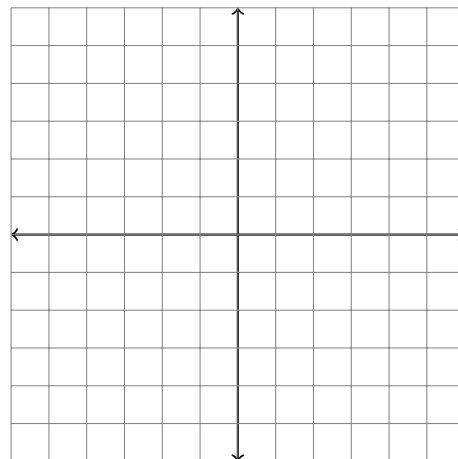
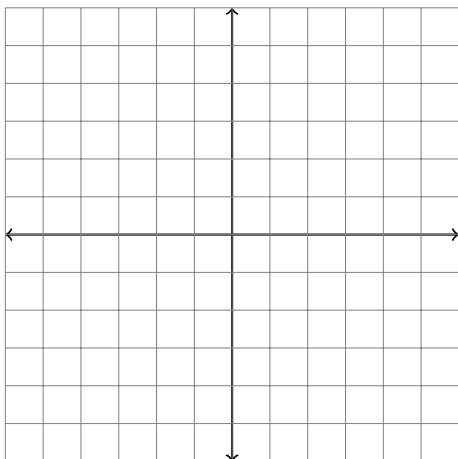


For each of the following, sketch  $f(x)$  and then sketch  $\ell(f(x))$  and  $f(\ell(x))$ .

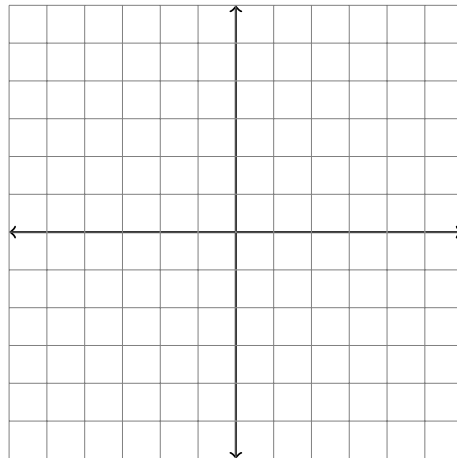
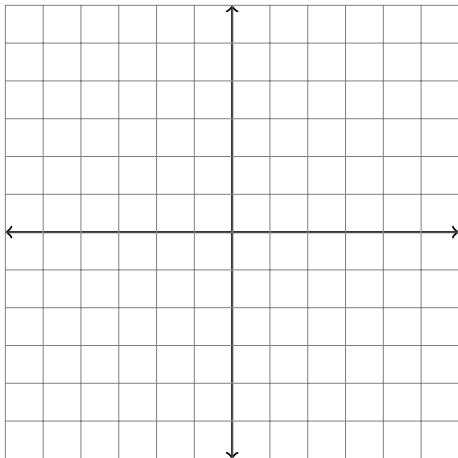
(a)  $f(x) = x^3 - x$  and  $\ell(x) = x - 3$



(b)  $f(x) = x^2 - 2x - 1$  and  $\ell(x) = 2x$



(c)  $f(x) = |x + 2|$  and  $l(x) = x/3$



(d)  $f(x) = \sqrt{x^2 + 1}$  and  $l(x) = x + 1$

