

Algebra II, Quiz 8.3-8.4

1) Let $f(x) = 2x^2 - 1$. Find a formula for $g(x)$ where g is as described below:

a) $f(x)$ shifted horizontally to the left 3 units

b) $f(x)$ shifted vertically down 2 units

c) $f(x)$ shifted horizontally to the left 3 units and vertically down 2 units

d) $f(x)$ scaled up by a factor of 3 in the horizontal direction

e) $f(x)$ scaled up by a factor of 2 in the vertical direction

2) Find the inverse function:

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

b) $f(x) = x^2$ with domain $x \geq 0$

c) $g(t) = \sqrt{t-1}$

d) $h(z) = 4 + \frac{2}{z-3}$