Example 1. Let $f(x) = 3x - 2$ and let $g(x) = x^2 + x$. Find the following functions:

(a) $f + g$
(b) fg
(c) f/g
(d) $f(g(x))$
(e) $g(f(x))$.

Example 2. Let $f(x) = x^2$. In each case you may use your calculator, or algebra, to figure out what the graph looks like. But, afterwards describe the graph geometrically as it compares to the original graph of x^2.

(a) $f(x) + 2$.
(b) $f(x + 2)$.
(c) $f(x - 2)$.
(d) $2f(x)$.
(e) $f(2x)$.

Example 3. In Hughes-Hallet, 4e, 1.4#36, we started with supply $q = 0.5p - 25$, demand $q = 165 - 0.5p$, and an equilibrium point of \$190 and 70 items.

Then a \$8.00 per item tax was imposed on the supplier. This changed the supply curve to $q = 0.5p - 29$ and gave a new equilibrium point of \$194 and 68 items.

Interpret the above information in terms of shifted curves.