Problem 2. a) $F(x) = \sqrt{x}$ and $g(x) = x^2 + 3$ b) $f(x) = x + \frac{5}{x}$ and $g(x) = \sqrt{x}$

(c) $f(x) = \frac{3}{x}$ and $g(x) = 3x^2 + 2x$.

(d) $f(x) = 5x^3$ and $g(x) = x^2 + 3x^3$.

Problem 6.

Put $f(x) = x^3$ and $g(x) = x^2 + 7x + 1$.

Problem 4.

(a) (iii)

(b) (vi)

(c) (ii)

(d) (i)

(e) (v)

Problem 5.

(a)

(b)

(c)

(d)

(e)

(f)

Problem 6.

(a) (ii)

(b) (iv)

(c) (v)

(d) (vi)

Problem 13.

(a) Shift the graph of $y = x^2$ left 1 unit, then flip over the $x-$axis, then stretch by a factor of 2, then shift up 3 units.

(b) Shift the graph of $y = x^2$ left 1 unit, then stretch by a factor of 7, then shift down 7 units.