1. Given that $f(x) = x - 4$ find:

a) $f(5)$ (1)

b) $f(3)$ (1)

2. Given that $g(x) = 2x^2 - 10$ find:

a) $g(2)$ (1)

b) $g(-2)$ (1)

c) Solve: $g(x)=8$ (3)

3. Given that $f(x) = 3x - 5$ find:

a) $f(3)$ (1)

b) $f(-2)$ (1)

c) *Solve*: $f(x)=1$ (2)

4. Given that $f(x) = x^2 - 3$ find:

a) $f(10)$ (1)

b) $f(-1)$ (1)

c) *Find* : $f^{-1}(x)$ (2)

5. Given that $f(x) = 2x - 4$ and $g(x) = 3x + 5$

a) Find: $gf(3)$ (2)

b) Work out an expression for: $f^{-1}(x)$ (2)

c) Solve: $f(x)=g(x)$ (2)

6. Given that $f(x) = 3x + 1$ and $g(x) = x^2$

a) Write down an expression for: $fg(x)$ (2)

b) Work out an expression for: $gf(x)$ (2)

c) Solve: $fg(x)=gf(x)$ (3)

7. Given that $f(x) = x^2 - 17$ and $g(x) = x + 3$

a) Work out an expression for: $g^{-1}(x)$ (2)

b) Work out an expression for: $f^{-1}(x)$ (2)

c) Solve: $f^{-1}(x)=g^{-1}(x)$ (4)

8. A function f is defined such that $f(x) = x^2 - 1$

a) Find and expression for : $f(x-2)$ (2)

b) Hence solve: $f(x-2)=0$ (2)

9. A function f is defined such that $f(x) = 4x - 1$

a) Find: $f^{-1}(x)$ (2)

The function g is such that $g(x) = k\,x^2$ where k is a constant

Given that $fg(2) = 12$

b) Work out the value of k (2)