Evaluating Functions

(a) $f(x) = 5x + 2$

Find (i) $f(3)$ (ii) $f(7)$
(iii) $f(-4)$ (iv) $f(-0.5)$

(b) $f: \to x^2 - 4$

Find (i) $f(4)$ (ii) $f(6)$
(iii) $f(-2)$ (iv) $f(0.9)$

(a)(i) 17 (ii) 37
(iii) −18 (iv) −0.5

(b)(i) 12 (ii) 32
(iii) 0 (iv) −3.19

(c) $g(x) = x^3 - 3x^2 - 2x + 1$

Find (i) $g(0)$ (ii) $g(1)$
(iii) $g(-1)$ (iv) $g(1.5)$

(d) $f(x) = \sqrt{2x + 5}$

Find (i) $f(2)$ (ii) $f(10)$
(iii) $f(-2)$ (iv) $f(-1.78)$

(c)(i) 1 (ii) −3
(iii) −1 (iv) −5.375

(d)(i) 3 (ii) 5
(iii) 1 (iv) 1.2

(e) The functions f and g are such that $f(x) = 3x - 5$ and $g(x) = 4x + 1$

(i) Find $f(-1)$ and $g(2)$

(ii) Find the value of x for which $f(x) = g(x)$.

(e)(i) $f(-1) = -8$
$g(2) = 9$

(ii) $3x - 5 = 4x + 1$
$x = -6$

(f) The functions f and g are such that $f(x) = 2x^2 - 1$ and $g(x) = 5x + 2$

(i) Find $f(-3)$ and $g(-5)$

(ii) Find the two values of x for which $f(x) = g(x)$.

(f)(i) $f(-3) = 17$
$g(-5) = -23$

$2x^2 - 1 = 5x + 2$
$2x^2 - 5x - 3 = 0$
$x = 3, \; x = -\frac{1}{2}$