Functions Revision

(a)	(b)	(c)	(d)
$f(x) = x^2 + 6$ Find $f(4)$	$g(x) = \dfrac{x}{x+5}$ Find $g(-1)$	$f(x) = 2(x-1)^2$ Find $f(1.5)$	$f(x) = 3x - 1$ Given $f(a) = 11$, find the value of a

(e)	(f)	(g)	(h)
$f(x) = \dfrac{3}{2x-4}$ Solve $f(x) = 1$	$f(x) = x^2 \quad g(x) = x + 6$ Solve $f(x) = g(x)$	$g(x) = \dfrac{3x}{x-4}$ Find the value of x that cannot be included in any domain of g.	$f(x) = 2x^2 \quad g(x) = x - 5$ Find $fg(8)$

(i)	(j)	(k)
$f(x) = 4 - 3x \quad g(x) = \dfrac{1}{2x+1}$ Find $gf(x)$, simplifying your answer.	$g(x) = 4x - 7$ Find the inverse function $g^{-1}(x)$	$f(x) = \dfrac{3x}{2x-1}$ Find the inverse function $f^{-1}(x)$

(l)	(m)	(n)
$f(x) = \dfrac{3}{2x+1} \quad g(x) = 5 - x$ Solve $fg(x) = -1$	$f(x) = \dfrac{2x}{1-3x}$ Solve $f(x) = f^{-1}(x)$	$g(x) = \dfrac{2x}{x+1}$ Find $gg(x)$