intro to functions

Question 1

$$h(x) = (x + 4)^2$$

Ivan needs to solve the following equation $h(x) = 25$

He writes

$(x + 4)^2 = 25$
$x + 4 = 5$
$x = 1$

(1 mark)

Question 2

The function f is such that

$$f(x) = \frac{3x - 5}{4}$$

Find $f(-7)$

$f(-7) =$ .....

(1 mark)

Question 3

f and g are functions such that

$f(x) = \frac{2}{x^2}$ and $g(x) = 4x^3$

Find $f(-5)$

$f(-5) =$ .....

(1 mark)

Question 4

$$g(x) = \frac{x}{x-1}$$

Solve the equation $g(x) = 1.2$

.....

(2 marks)

Question 5

The function f is defined as $f(x) = \frac{3}{4+x}$

The function g is defined as $g(x) = 5 + x$

Given that $g(a) = 7$, find the value of a.

.....

(1 mark)

Question 6

$$f(x) = \frac{3}{x+1} + \frac{1}{x-2}$$

Find the value of x for which $f(x) = 0$ Show clear algebraic working.

$x =$ .....

(3 marks)

Question 7

The function f is such that $f(x) = \frac{2x}{3x+5}$

The function g is such that $g(x) = \frac{3}{x+4}$

Solve the equation $f(x) = g(x)$

.....

(4 marks)

Question 8

$$f(x) = 3x^2 - 2x - 8$$

Express $f(x + 2)$

$f(x + 2) =$ **.....**
