The functions $f(x)$ and $g(x)$ are given by the following:

\[
f(x) = 5x - 2 \\
g(x) = x^2 + 3x
\]

a) Calculate the value of $f(\frac{5}{2})$

b) Calculate the value of $g(-5)$

c) Find the value of $x$ when $f(x) = 60$

The functions $h(x)$ and $g(x)$ are given by the following:

\[
h(x) = 3x + 2 \\
g(x) = 2x - 7
\]

a) Find the value of $x$ when $g(x) = 23$

b) Find the solutions for $x$ when $h(x) = 9$

c) Find the value of $h^{-1}(x)$ when $g^{-1}(x) = 5$

The function $g$ is such that $g(x) = 5x - 4$

a) Find $g^{-1}(x)$

b) Work out the value of $K$

c) Find the value of $f(x) + g(x)$

d) Find $K$ given that $gh(3) = 86$

The function $h$ is such that $h(x) = kx^2$ where $K$ is a constant.

Given that $gh(3) = 86$

b) Work out the value of $K$

c) Find the value of $f(x) + g(x)$

The functions $f(x)$ and $g(x)$ are given by the following:

\[
f(x) = 2x + a \\
g(x) = ax + 7
\]

and $g(x) = 8x + b$

$a$ and $b$ are constants.

Work out the values of $a$ and $b$.

For all values of $x$, $h(x) = 5x^2 - 7$

a) Find the expression for $f^{-1}(x)$

b) Find an expression for $h^{-1}(x)$

The functions $f(x)$ and $g(x)$ are given by the following:

\[
f(x) = 3x \\
g(x) = 2x - 3
\]

Solve the equation $fg(x) = 21$

\[
f(x) = 3x \\
g(x) = 2x - 3
\]

The functions $f(x)$ and $g(x)$ are given by the following:

\[
f(x) = 5x - 2 \\
g(x) = x^2 + 3x
\]

a) Find the value of $f(x)$

b) Find the value of $g(x)$

c) Find the value of $f(x) + g(x)$

The diagram shows a sketch of the graph $y = f(x)$.

The graph passes through the points $(-3, 0)$ and $(5, 0)$.