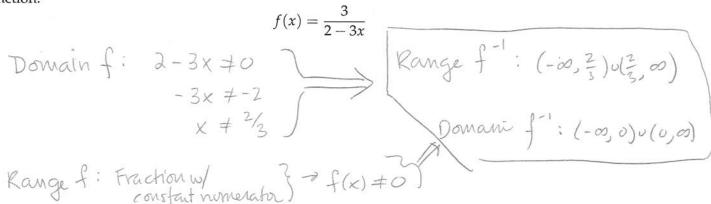
Name: 8:00 or 9:30

1. Determine the domain and range of f^{-1} for the given function f without actually finding the inverse function.



2. Find the inverses of the following functions.

a)
$$g(x) = 5 - 7x$$

 $g(x) - 5 = -7x$
 $g(x) - 5 = \times$, so: $g'(y) \Leftrightarrow x$ $g'(y) \Leftrightarrow x$ $g'(y) \Leftrightarrow x$

b)
$$h(x) = \frac{9x+5}{5x-6}$$

 $f_{1}(x)(5x-6) = 9x+5$
 $5x f_{1}(x) - 6f_{1}(x) = 9x+5$
 $5x f_{2}(x) - 9x = 5 + 6f_{1}(x)$
 $5x f_{2}(x) - 9x = 5 + 6f_{2}(x)$
 $5x f_{2}(x) - 9x = 5 + 6f_{2}(x)$
 $5x f_{2}(x) - 9x = 5 + 6f_{2}(x)$
 $6x f_{2}(x) -$

3. Determine the inverse function of
$$(g \circ f)(x)$$
.

$$(g \circ f)^{-1} = (f^{-1} \circ g^{-1})$$

$$f(x) = 9x + 7$$

$$f(x) = 9x + 7$$
 $g(x) = -10x + 8$

$$f'(y) = \frac{y-7}{9}$$
 $g'(y) = \frac{y-8}{-10}$

So
$$(g \circ f)^{-1}(y) = \frac{(\frac{y-8}{-10})-7}{9}$$

4. There are two functions, h(x) and L(z) defined by tables below.

x	2	3	4	7	5
h(x)	-2	-1	2	2	4

Z	-3	-1	2	3	8
L(z)	2	1	3	5	-1

Calculate the following values.

a)
$$(L \circ h)(3)$$

$$= L(h(3))$$

b)
$$(h^{-1} \circ L^{-1})(3)$$

$$= k^{-1}(L^{-1}(3))$$

c)
$$(L^{-1} \circ h)(3)$$

$$= L^{-1}(h(3))$$

d)
$$(h \circ L)^{-1}(3)$$

$$=(L^{-1}\circ h^{-1})(3)$$

$$= \lfloor -1 (h^{-1}(3))$$

$$= L^{-1}(4) = 3$$

