

FUNCTIONS

Exercise 8.3

a) If $f(x) = 3x + 2$, find the images of the following:

- i) $f(0)$ _____
- ii) $f(-2)$ _____
- iii) $f(1/2)$ _____
- iv) $f(-5/3)$ _____

b) If $f(x) = x^2 - 2x$, find the values of:

$f(0)$ _____

$f(-5)$ _____

$f(-3)$ _____

$f(2)$ _____

c) If $g(x) = \frac{2(x-1)}{x^2+2}$, find the values of:

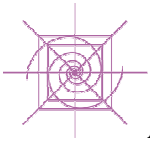
$g(0)$ _____

$g(1)$ _____

$g(-2)$ _____

$g(-1/2)$ _____

Find the range of g



Find the inverses of the following functions:

d) $p: x \mapsto \frac{3x+3}{5}$

e) $h: x \mapsto \frac{1}{x+1}$

f) $q: x \mapsto \frac{1}{3+x}$

Hence, find the following:

g) $f^{-1}(3)$

h) $g^{-1}(1/2)$

i) $k^{-1}(-2/3)$

j) $p^{-1}(0)$

k) $h^{-1}(2)$

l) $q^{-1}(-2)$
