

Exercise 5G Exam Style Questions

Question 1

Let $h: (-4, 6] \rightarrow \mathbb{R}, h(x) = -2x + 7$

- a. Sketch the graph of $h(x)$ on the set of axes below:

- b. Complete the domain range table below:

Dom(h)	Ran (h)
Dom(h^{-1})	Ran(h^{-1})

- c. Specify the inverse function h^{-1} .

- d. Find the co-ordinates of the point where h and h^{-1} intersect.

Question 2

Let $u: (-\infty, a] \rightarrow \mathbb{R}, u(x) = -(x - 3)^2 + 5$

a. Find the largest value of a for which the function u has an inverse function.

b. Sketch the graph of $u(x)$ on the diagram below.

c. Fill out the domain range table below:

Dom(u)	Ran (u)
Dom(u^{-1})	Ran(u^{-1})

d. Sketch the graph of $u^{-1}(x)$ on the same set of axes.

d. Sketch the graph of v^{-1} on the same diagram above.

e. Specify v^{-1} .

f. Find the exact co-ordinates of the point where v and its inverse intersect.