Grade 12

Past Paper Question

June 2019

QUESTION 4

Given the exponential function: $g(x) = \left(\frac{1}{2}\right)^x$

4.1 Write down the range of g. (1)

4.2 Determine the equation of g^{-1} in the form $y = \ldots$ (2)

4.3 Is g^{-1} a function? Justify your answer. (2)

4.4 The point M(a ; 2) lies on g^{-1}.

4.4.1 Calculate the value of a. (2)

4.4.2 M', the image of M, lies on g. Write down the coordinates of M'. (1)

4.5 If $h(x) = g(x + 3) + 2$, write down the coordinates of the image of M' on h. (3)

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