Name: Date:

مدرسة الاتحاد الوطنية الخاصة - العين
Al Ittihad National Private School - Al Ain

Title: Geometry: **7.1 Inverse Functions and Function Composition**

LO: To find inverse functions and use composition of functions to create new functions.

Instructions: Copy the following questions to your notebook and solve them. Once done submit them on Schoology

1) Find the inverse of the following functions:

a) $f(x) = 3x - 8$

1: Replace $f(x)$ with y

2: Make x the subject

3: Switch x and y

4: Replace y with $f^{-1}(x)$

b) $g(x) = \frac{x-2}{3}$

1: Replace $g(x)$ with y

2: Make x the subject

3: Switch x and y

4: Replace y with $g^{-1}(x)$

LIVEWORKSHEETS

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

$$f(x) = x + 5$$
$$g(x) = 3x + 8$$

a) Find $(f\,o\,g)(x)$

b) Find $(f\,o\,g)(3)$

Extension (Challenge):

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

$$f(x) = x^2 - 3$$
$$g(x) = 2x + 1$$
$$h(x) = \frac{x}{2}$$

Find $(\mathrm{g}\,o\,\mathrm{h})(x)$

Find $\boldsymbol{f^{-1}(x)}$

LIVEWORKSHEETS