

Name:

Date:

Composite Function_ Exam Style Questions

1. [Maximum Marks: 5]

NO_GDC

Consider the functions $f(x) = 2x - 4$ and $g(x) = x^2 + p^2$, where p is a real constant.

a) Write down an expression for $(gof)(x)$ [2]

b) Given that $(gof)(3) = 40$, find the possible values of p . [3]

Functions f and g are defined by

$$f(x) = \sqrt{x+2} \text{ and } g(x) = \frac{3x-4}{x-2} \quad (x \neq 2)$$

- a) Find the range of $g(x)$ [2]
- b) Solve the equations $g(x) = 1$ [2]
- c) Find the domain and range of $(f \circ g)(x)$ [2]