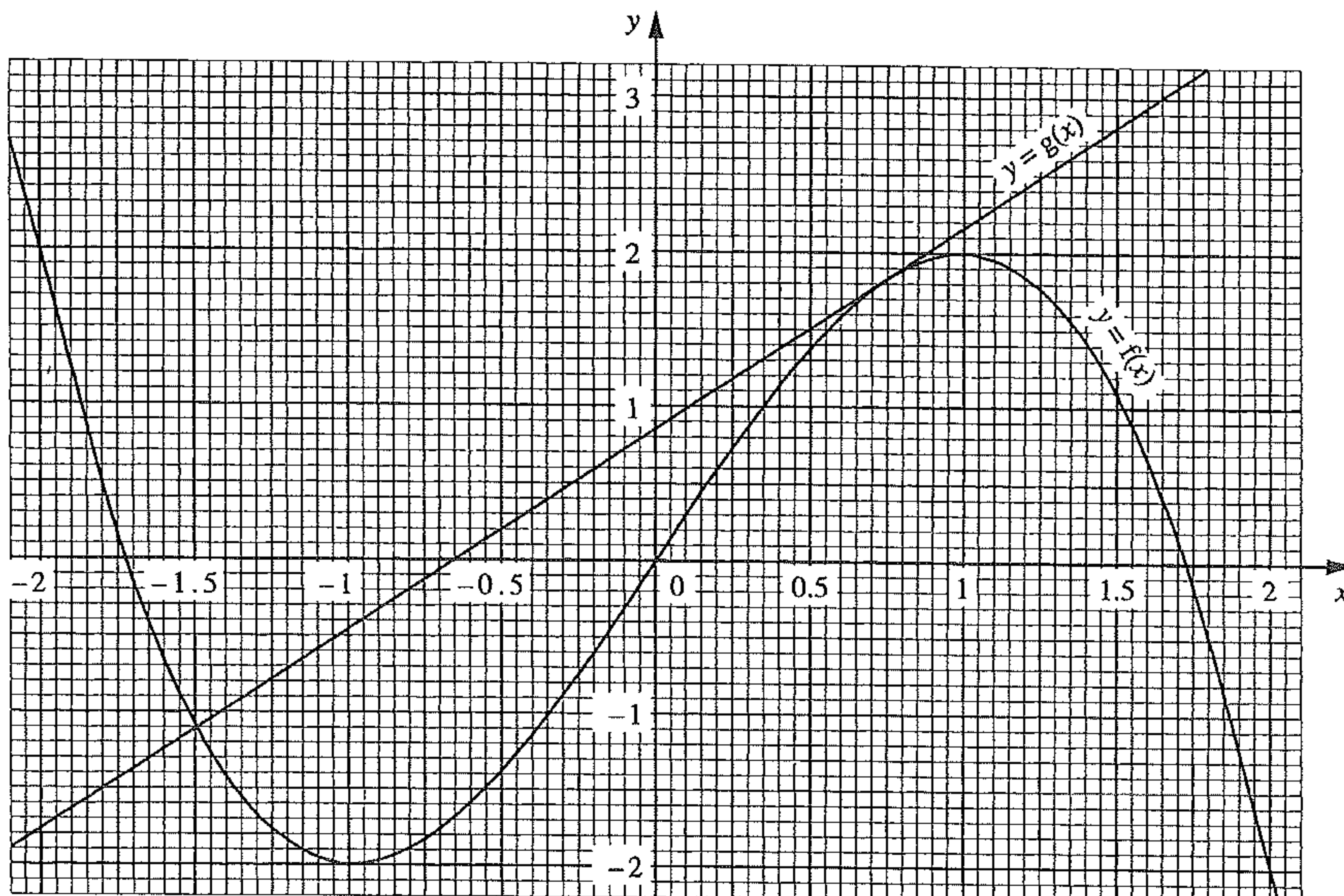# IGCSE – Functions and Graphs – 2

Oct 01 Paper 4

6

The graphs of $y = f(x)$ and $y = g(x)$ are drawn on the grid above.

The line $y = g(x)$ is the tangent to the curve $y = f(x)$ at $x = 0.75$.

(a) Find

    (i) $f(1.5)$,   [1]

    (ii) $g(0)$,   [1]

    (iii) $g^{-1}(-0.5)$.   [1]

(b) (i)   Find the range of values of x such that $f(x) > g(x)$.   [2]

    (ii)   Solve $f(x) = 0$.   [2]

    (iii)   Find the range of values for k when $f(x) = k$ has 3 different solutions.   [2]

(c) Calculate the gradient of $y = f(x)$ where $x = 0.75$.   [3]

(d) Solve $1 - f(x) = 0$.   [3]