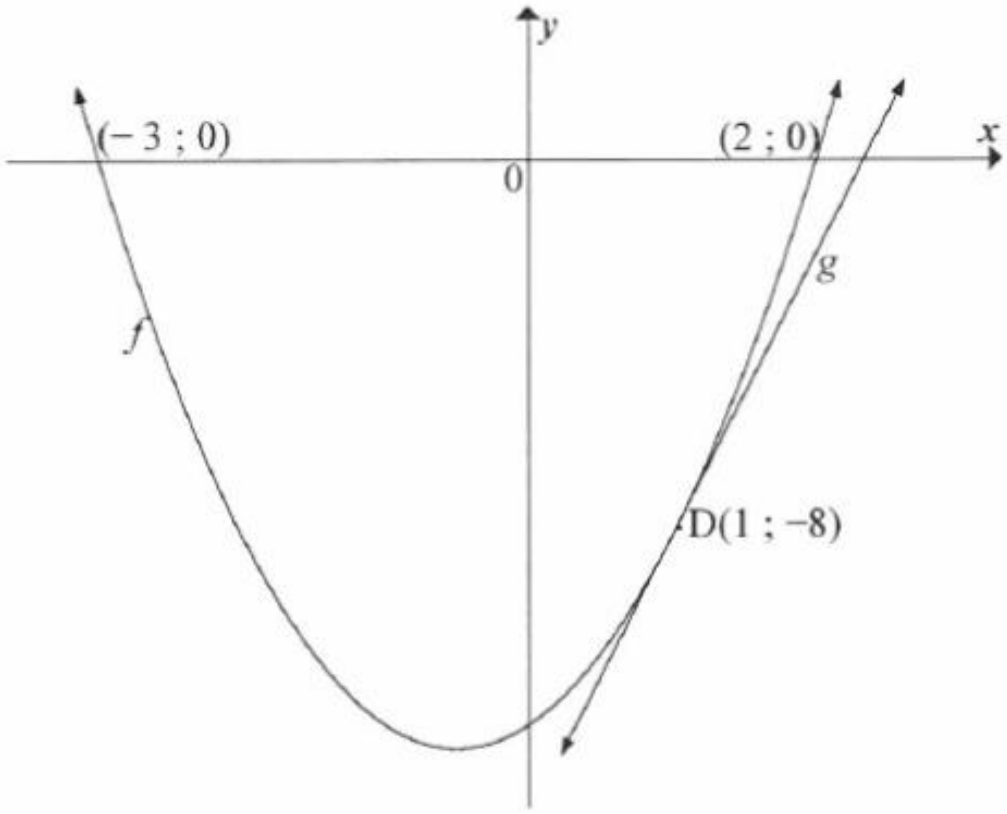
INFORMAL TEST 2

GRADE 12

The graphs of $f(x) = ax^2 + bx + c$; $a \neq 0$ and $g(x) = mx + k$ are drawn below.

D(1 ; – 8) is a common point on f and g.

- f intersects the x-axis at (– 3 ; 0) and (2 ; 0).
- g is the tangent to f at D.



6.1 For which value(s) of x is $f(x) \leq 0$? (2)

6.2 Determine the values of a, b and c. (5)

6.3 Determine the coordinates of the turning point of f. (3)

6.4 Write down the equation of the axis of symmetry of h if $h(x) = f(x - 7) + 2$. (2)

6.5 Calculate the gradient of g. (3)