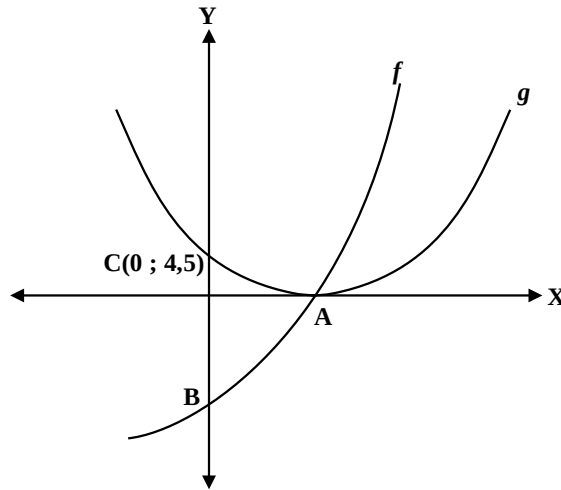


Worksheet 2024-12 EF-00007(3) Revision from past papers

The graphs of  $f(x) = 2^x - 8$  and  $g(x) = ax^2 + bx + c$  sketched below. B and C(0 ; 4,5) are the y-intercepts of the graphs of  $f$  and  $g$  respectively. The two graphs intersect at A, which is the turning point of the graph of  $g$  and the x-intercept of the graphs of  $f$  and  $g$ .



- (1) Determine the coordinates of A and B. (4)

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- (2) Write down the equation of the asymptote of graph  $f$ . (1)

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- (3) Determine the equation of  $h$  if  $h(x) = f(2x) + 8$ . (2)

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- (4) Determine the equation of  $h^{-1}$  in the form  $y = \dots$ . (2)

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- (5) Write down the equation of  $p$ , if  $p$  is the reflection of  $h^{-1}$  in the  $x$ -axis. (1)

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(6) Calculate  $\sum_{k=0}^3 g(k) - \sum_{k=4}^5 g(k)$ . Show ALL calculations.

(4)

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