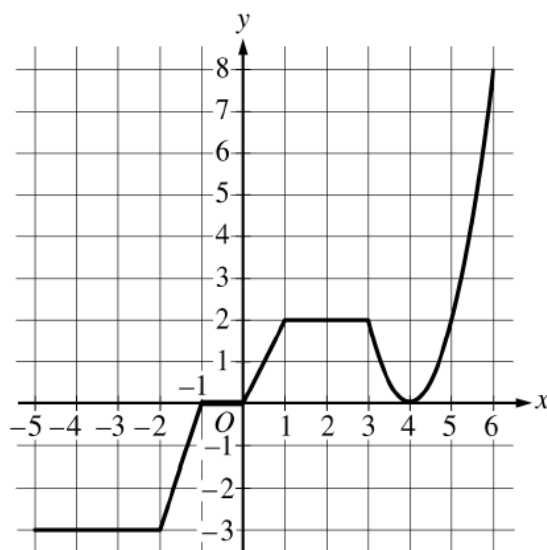


2018 AP[®] CALCULUS AB FREE-RESPONSE QUESTIONS**NO CALCULATOR IS ALLOWED FOR THESE QUESTIONS.**Graph of g

3. The graph of the continuous function g , the derivative of the function f , is shown above. The function g is piecewise linear for $-5 \leq x < 3$, and $g(x) = 2(x - 4)^2$ for $3 \leq x \leq 6$.
- (a) If $f(1) = 3$, what is the value of $f(-5)$?
- (b) Evaluate $\int_1^6 g(x) \, dx$.
- (c) For $-5 < x < 6$, on what open intervals, if any, is the graph of f both increasing and concave up? Give a reason for your answer.
- (d) Find the x -coordinate of each point of inflection of the graph of f . Give a reason for your answer.
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