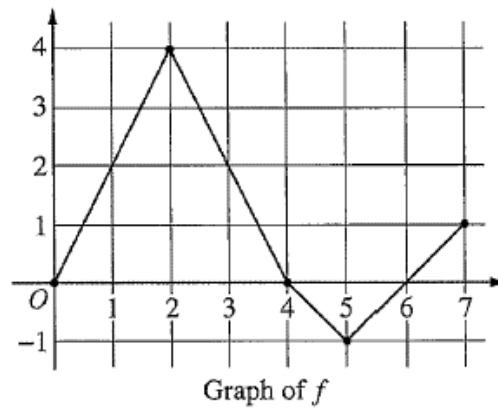


**Adaptation of 2003 Calculus AB Form B question 5 for Middle Grades**



1. For what values of  $x$  is  $y = 0$ ?
2. Find all values of  $x$  for which  $y = 2$ .
3. For what values of  $x$  is  $y$  positive?
4. For what values of  $x$  is  $y$  negative?
5. For what values of  $x$  is the graph increasing?
6. For what values of  $x$  is the graph decreasing?
7. What is the maximum value of  $y$ ?
8. For what value of  $x$  does the graph reach its maximum value?

9. What is the minimum value of  $y$ ?
10. For what values of  $x$  does the graph reach its minimum value?
11. Find the area of the region enclosed by the graph and the  $x$ -axis for  $0 \leq x \leq 4$ ? Show your work.