Name	Period	Date

## Assignment #2B: Finding Area Between 2 Curves

You may use a calculator unless otherwise stated. These are all old AP questions. Note that in most cases, 2-3 points are assigned per problem. The typical scoring guideline assigns 1-2 point(s) for writing the integral and limits correctly, and 1 point for the correct final answer (correct to at least 3 decimal places where appropriate).

1. (Calc OK – 1999AB2) The shaded region, *R*, is bounded by the graph of  $y = x^2$  and the line y = 4, as shown in the figure below. Find the area of *R*.



Name \_\_\_\_\_ Period \_\_\_ Date \_\_\_\_\_ 3. (No calcs - 1999AB5) The graph of the function, *f*, consisting of three line segments, is given below. Let  $g(x) = \int_{1}^{x} f(t) dt$ . (a) Compute g(4) and g(-2).

- (b) Find the absolute minimum value of g on the closed interval [-2,4]. Justify your answer.
- (c) Find the absolute maximum value of g on the closed interval [-2,4]. Justify your answer.