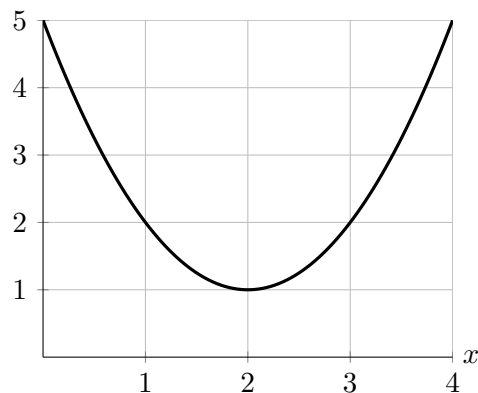


9. [7 points] The graph of  $h'(x)$  (the **derivative** of  $h(x)$ ) is shown below.

$$y = h'(x)$$



- a. [3 points] Find a formula for the tangent line approximation  $L(x)$  to the function  $h(x)$  near  $x = 2$  if the point  $(2, -3)$  lies on the graph of  $y = h(x)$ . Your answer should not include the letter  $h$ .

**Answer:**  $L(x) =$  \_\_\_\_\_

- b. [1 point] Use the tangent line approximation to the function  $h(x)$  near  $x = 2$  to approximate the value of  $h(1.6)$ .

**Answer:**  $h(1.6)$  is approximately \_\_\_\_\_

- c. [3 points] Is your approximation in part **b** an overestimate or an underestimate? Circle your answer and give a justification of your answer.

OVERESTIMATE

UNDERESTIMATE

NOT ENOUGH INFORMATION

**Justification:**