- A. Is g differentiable at x = 2? Justify your answer.
- B. Which is greater: the average rate of change of k on [1,4] or the instantaneous rate of change of k at x=1? Explain.
- C. Let m(x) = h(f(x)). Find m'(3).
- D. Let $n(x) = h(x) \cdot f(x)$. Find n'(3).
- E. Use a right Riemann sum with the three subintervals indicated by the table to estimate $\int_{2}^{8} h(x) dx$.
- F. Write the equation of the line tangent to the graph of h at x = 8.
- G. At which x-value(s) does the graph of j have horizontal tangent lines?
- H. Find $\lim_{h\to 0} \frac{j(2+h)-j(2)}{h}$.
- I. Let $p(x) = \frac{k(x)}{h(x)}$. Find p'(3).
- J. Find $\lim_{x\to 5} \frac{k(x)-k(5)}{x-5}$.

- K. Find g'(6) and write a sentence interpreting its meaning.
- L. Are we guaranteed a value c for 4 < c < 7 such that $f'(c) = \frac{1}{3}$? Explain.
- M. Does h have a relative maximum, minimum, or neither at x = -1? Justify your answer.
- N. Find $\lim_{x\to 2^-} f'(x)$.
- O. Give two x-values where the graph of h is above the x-axis and h is decreasing at an increasing rate.
- P. Let q be a function such that q'(x) = g(x). At which x-values does the graph of q have a point of inflection? Explain.
- Q. Let $w(x) = \int_{-2}^{x} j(t)dt$. Find w'(0).
- R. Let $r(x) = \cos(\pi x) \cdot f(x)$. Find r'(4.5).
- S. For $x \le 2$, find $\lim_{h \to 0} \frac{g(x+h) g(x)}{h}$.
- T. Would the line tangent to the graph of h at x=5 give an under- or over-approximation for h(5.1)? Explain.

U. Find $\int_1^3 f'(2x) dx$.

V. Let $w(x) = \int_{-2}^{x} j(t)dt$. Find w(0).