In Exercises 29 and 30, use the limit definition to find the derivative of the function at the specified point, if it exists.

29. $f(x) = 1 - x - 2x^2$ at $x = 2$

30. $f(x) = (x + 3)^2$ at $x = 2$

In Exercises 31 and 32, find **(a)** the average rate of change of the function over the interval $[3, 3.01]$ and **(b)** the instantaneous rate of change at $x = 3$.

31. $f(x) = x^2 + 2x - 3$

32. $f(x) = \dfrac{3}{x + 2}$

In Exercises 33 and 34, find **(a)** the slope and **(b)** an equation of the line tangent to the graph of the function at the indicated point.

33. $f(x) = x^3 - 2x + 1$ at $x = 1$

34. $f(x) = \sqrt{x - 4}$ at $x = 7$

Find the LRAM, the RRAM, using 8 rectangles for the indicated function. Then average the two to get a good estimate of the area under the curve.

37. $f(x) = (x - 5)^2;$ $[0, 4]$

38. $f(x) = 2x^2 - 3x + 1;$ $[1, 5]$