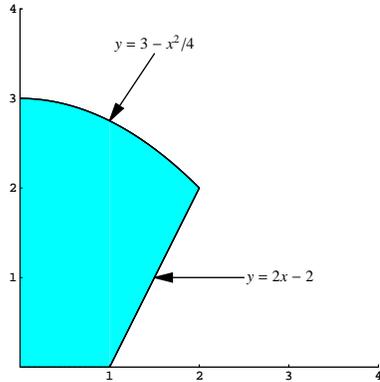


4. We can model a muffin as a solid of revolution, obtained by rotating the following region about the y -axis. Due to a poor recipe, the chocolate chips in our muffin tend to sink to the bottom. The amount of chocolate in the muffin is given by $\rho(y) = 5 - y$ grams per cubic inch, where y represents the distance to the bottom of the muffin. Find the total amount of chocolate in the muffin.



5. You ride your bike with velocity $v(t) = 3t^2 + 4t - 5$ in the time interval $[0, 3]$. What is your average velocity?

6. The temperature outside is given by the function $f(t)$, where t represents the time since 10:00 am. How would you find the average temperature between noon and 5:00 pm?

7. The graph of a function f is shown. The graph is made up of lines and semicircles. Find the average value of f on the interval $[1, 5]$.

